. . . . MAY, 1941

THE MANUFACTURING CONFECTIONER

PIONEER SPECIALIZED PUBLICATION FOR CONFECTIONERY MANU[illegible]RERS

TWENTIETH ANNIVERSARY and INDUSTRY PROGRESS ISSUE

UP FRONT with Lignin VANILLIN

Get your candy up front with top flavor quality.

Lignin Vanillin brings to your product a superiority of flavor which makes the difference that makes the sale.

Flavor is what identifies YOUR product.

LIGNIN VANILLIN
is a Domestic Product Originated and Manufactured in America

CANDY
DELICIOUS FOOD

Aromatics Division
GENERAL DRUG COMPANY

TRANSPORTATION BLDG., LOS ANGELES
644 PACIFIC ST., BROOKLYN, N. Y.

9 S. CLINTON ST., CHICAGO
1019 ELLIOTT ST., W., WINDSOR, ONT.

THE MANUFACTURING CONFECTIONER

Pioneer Specialized Publication for Confectionery Manufacturers

PLANT MANAGEMENT, PRODUCTION METHODS, MATERIALS, EQUIPMENT, PURCHASING, SALES, MERCHANDISING

Vol. XXI, No. 5 — May, 1941

20th Anniversary Issue

Publisher's Anniversary Statement 8
N.C.A. and A.R.C. Convention Programs 14
Exhibitors at N.C.A. Convention 16-17
Scientific Management ..... G. H. Williamson 25
Industry Girds for Tax Fight 27
A Symposium—Yesterday, Today and Tomorrow 28
Sugar—Twenty-Year Effort To Be Helpful ..... E. W. Rice 31
Vitamins—Brief History of Their Uncovering ..... R. Whymper 33
Chocolate Progress ..... B. J. Zenlea 35
Flavors—Twenty Years of Progress ..... C. Johnstone 38
Machinery—Instruments of Cost Reduction ..... M. Gianini 39
Corn and Confectionery ..... E. H. Clark 42
Taxation—Striking Parallel with 1921 ..... W. C. Hughes 43
Other Important Raw Materials—Pectin 44
Molasses ..... J. A. King 44
Lecithin 64
Nuts in Confectionery—Peanuts ..... H. J. Clay 46
Pecans ..... E. G. Marsh, Jr. 47
Brazils ..... T. R. Schoonmaker 70
Air Conditioning ..... Vernon Cano 54
Fourteen Years of Candy Clinic Analyses ..... Eric Lehman 55
Clinic on Easter Goods 56
Candy Packaging—
Eye-Appeal and Protection ..... F. W. Brinkman 75
Candy Packaging Clinic 82
The Clearing House (Classified Advertising) 91
Advertisers' Index 98

Founder
EARL R. ALLURED

Publisher and Editor
PRUDENCE W. ALLURED

Associate Editor
OTTO F. LIST

Eastern Manager
WILLIAM C. COPP

English Representative
L. M. WEYBRIDGE
36 Victoria St. London S.W. 1

• • •

SUBSCRIPTION PRICE: ONE YEAR, $3.00
TWO YEARS, $5.00. PER COPY, 35c

Entered as Second Class Matter at the Post Office at Pontiac, Illinois, under the act of March 3, 1879.

Copyright, 1940, Prudence W. Allured.

PUBLISHED MONTHLY ON THE 15TH BY

THE MANUFACTURING CONFECTIONER PUBLISHING COMPANY

Publishers of

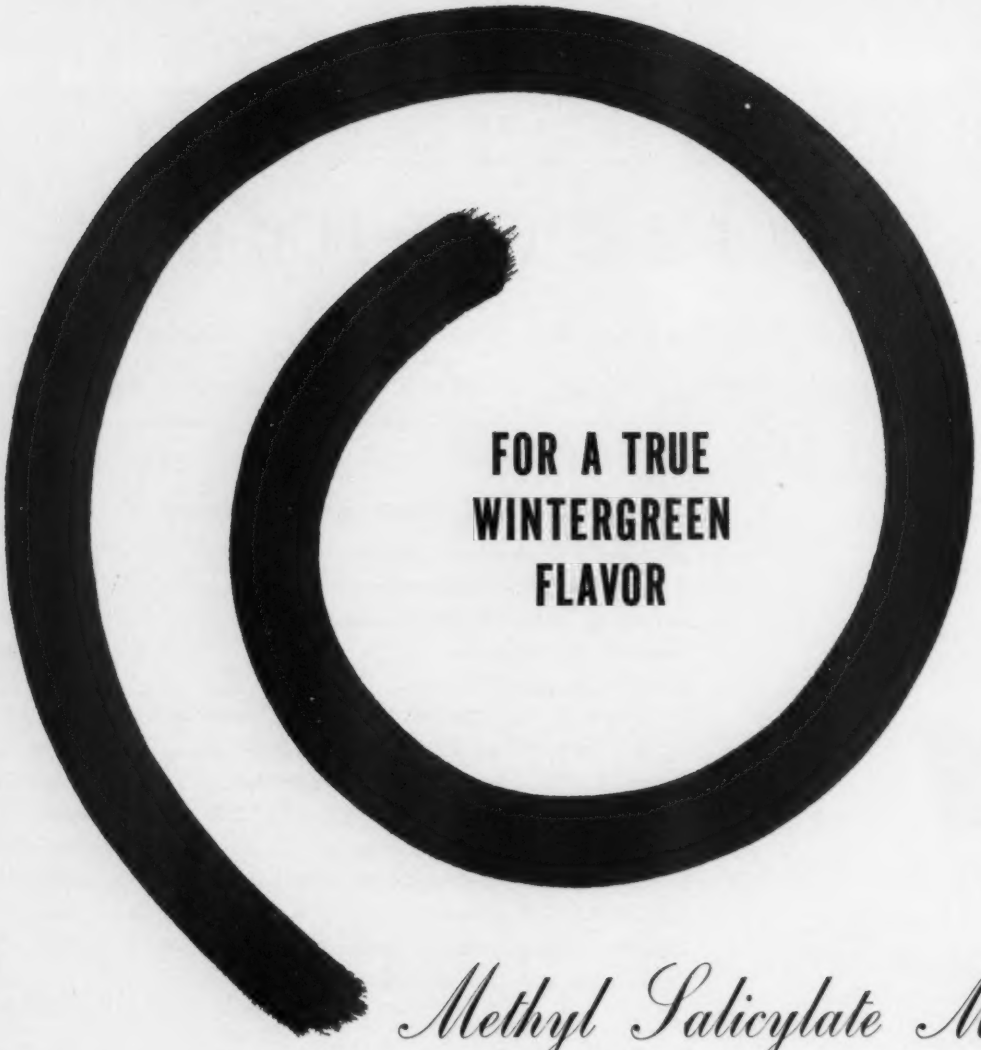
THE MANUFACTURING CONFECTIONER - CANDY PACKAGING - THE CONFECTIONERY BUYERS DIRECTORY

Publication Office: Pontiac, Illinois

Executive Office
400 West Madison St. (Daily News Bldg.)
Chicago, Illinois. Telephone Franklin 6369

MEMBER AUDIT BUREAU OF CIRCULATIONS

Eastern Office
71 West 23rd St., New York City, N. Y.
Telephone . . . . Gramercy 5-5958



Methyl Salicylate Monsanto

Specifications
Methyl Salicylate Monsanto

Appearance: water-white liquid.

Odor: characteristic wintergreen, pure, sweet.

Specific gravity: (at 25°C.) 1.180 —1.185.

Solubility in alcohol: 1.7 complete.

Heavy Metals: negative.

Other High Quality
Monsanto Flavorings:
Ethavan (Ethyl Vanillin)
Vanillin Monsanto
Coumarin Monsanto

Here's an opportunity to improve quality and sales appeal of your products that you can't afford to miss!

Methyl Salicylate Monsanto is available at an extremely favorable price, and stocks are ample to take care of all requirements.

Long known for its true wintergreen flavor and aroma, Methyl Salicylate Monsanto has established itself as the standard of quality and uniformity with a large and ever-growing number of candy, chewing gum and flavor manufacturers.

See for yourself how much the high quality of Methyl Salicylate Monsanto can add to the sales appeal of *your* products. For a four-ounce sample and a quotation on your requirements, inquire: MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, St. Louis, U. S. A. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal.

MONSANTO CHEMICALS

FELTON FLAVORS BUILD YOUR BUSINESS •

When delicious Felton Flavors work for you, they do a job that always tickles your sales figures. They're in the "building business" . . . the business of building sales.

Make up samples of your candy using these live-wire Felton Flavors. Discover why many of the most successful candy manufacturers have been using them for years. You can taste the improvement . . . and so can your customers!

There is a Felton Flavor for every kind of candy —tested in the batch—perfect for every purpose.

WRITE FOR SAMPLES AND FLAVOR CATALOG

FELTON
CHEMICAL COMPANY, INC.
599 JOHNSON AVE.
BROOKLYN, N. Y.

Manufacturers of Aromatic Chemicals, Natural Derivatives, Fruit Ethers, Terpeneless Essential Oils, Vanilla Concentrates, Natural and Imitation Flavor Bases

BRANCHES IN PRINCIPAL CITIES

Our 20th Anniversary --

This year marks our Twentieth Year of publishing for our chosen audience, the producers of confectionery. Time has proven that THE MANUFACTURING CONFECTIONER established a sound program of publishing that was needed and acceptable to our audience of manufacturing confectioners. Re-stating our purpose—"to establish a specialized industrial publication exclusively for the producers of confectionery, wherein they can find authoritative discussions concerning their manufacturing, merchandising and selling problems." We believed then, and still believe, that the manufacturers' publication in such a wonderful industry should be a source of information and of inspiration to maintain the highest quality standard of product which the public has a right to expect from "confections"—the elite of food.

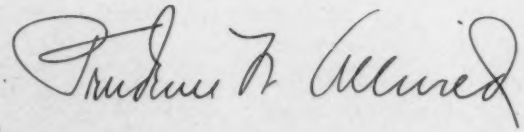
THE MANUFACTURING CONFECTIONER, therefore, has a high calling—a responsibility for exerting a constructive, elevating influence that will help the industry to meet today's challenge in the new industrial order. We want this specialized business paper to be always, as it has been since its inception, a vital factor in the progress of the confectionery industry and a powerful ally in the sales promotion plans of its supply industry.

This Anniversary Issue is dedicated to all manufacturing confectioners. Its purpose is to mirror the technical progress that has contributed most to industry progress over the past 20 years, and in some measure, to point to possible avenues of future progress. Space limitations have prevented inclusion of all important phases, but a follow-up on omitted subjects will be an important part of our editorial program for the rest of 1941.

THE MANUFACTURING CONFECTIONER is more than just so much paper and printer's ink. It is an institution—a personality—with ideals and with carefully defined objectives. Its relationship with manufacturing confectioners is something more than just "contact." We have taken a long look ahead and visualized where our part in the growth of the industry can be broadened to meet the challenge of a changing world.

To you, Charter Subscribers here in America and all over the world, our appreciation for the generous and enthusiastic reception you have accorded every issue of THE MANUFACTURING CONFECTIONER over all these years. To you, our advertisers, appreciation for sensing the need for a high grade manufacturers' magazine and for backing your faith with signed contracts.

It shall be our endeavor to continue to provide a medium for frank and free discussion of manufacturing problems and policies, methods and materials. This policy also applies to the advertising pages which are available only for messages directed to manufacturing confectioners and concerning reputable products or services applicable to the candy factory and its executive and operating personnel.



Sold to the American Market Exclusively by

DODGE & OLCOTT COMPANY
180 VARICK STREET, NEW YORK, N. Y.

FRITZSCHE BROTHERS, INC.
76 NINTH AVENUE, NEW YORK, N. Y.

Distributors for

CALIFORNIA FRUIT GROWERS EXCHANGE
PRODUCTS DEPARTMENT, ONTARIO, CALIFORNIA

PRODUCING PLANT: EXCHANGE LEMON PRODUCTS CO., CORONA, CALIFORNIA

Copr., 1940, California Fruit Growers Exchange, Products Department

Wholesale and Retail Candy Manufacturers

HYFAT

Sweetened Hydensity Cream

HYFAT is fresh cream, sweetened and flashed to a total solids of 90%. In candy, it accomplishes everything you obtain from fresh cream without being subject to the deteriorating influences which make the use of fresh cream difficult and expensive. You can order it in large quantities and warehouse it without affecting its freshness and flavor character. It is **not a fat or a grease.**

Preservation of the fresh cream flavor is accomplished by the "Basic Hydensity Process" which completely controls oxidation and butterfat. The butterfat and milk solids not fat content are the same as in 20% fresh cream. HYFAT keeps, is soluble, retains its flavor, contains no milk powders, gums, starches or added fats. It gives you everything you get from fresh cream **without** rancidity, with low acidity, and no breakdown whatever of the butterfat. When you use HYFAT, the procedure is the same as with fresh cream, except that its sugar content must be allowed for. It has freshness, smoothness and it eliminates coagulation.

HYFAT is made in the heart of the dairy country under the exclusive "Basic Hydensity Process." Every step of this process is under complete control at all times so that all possibility of burning, caramelizing or development of "off" flavor is eliminated. HYFAT can be creamed on the slab or added to the Ball beater or folded-in to various batches.

Samples, Prices and Information on Request

NEW YORK
A. B. Cassidy
2440 Amsterdam Ave.

PHILADELPHIA
H. C. Nuss
3633 Walnut St.

BOSTON
A. B. Campbell
150 Milk Street

BASIC INDUSTRIES, INC.
919 N. MICHIGAN AVENUE ★ CHICAGO, ILL.

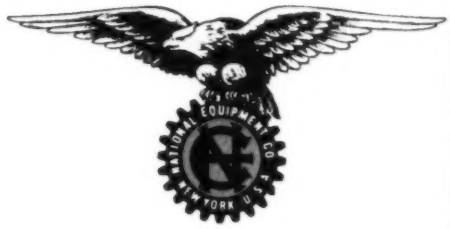
NATIONAL

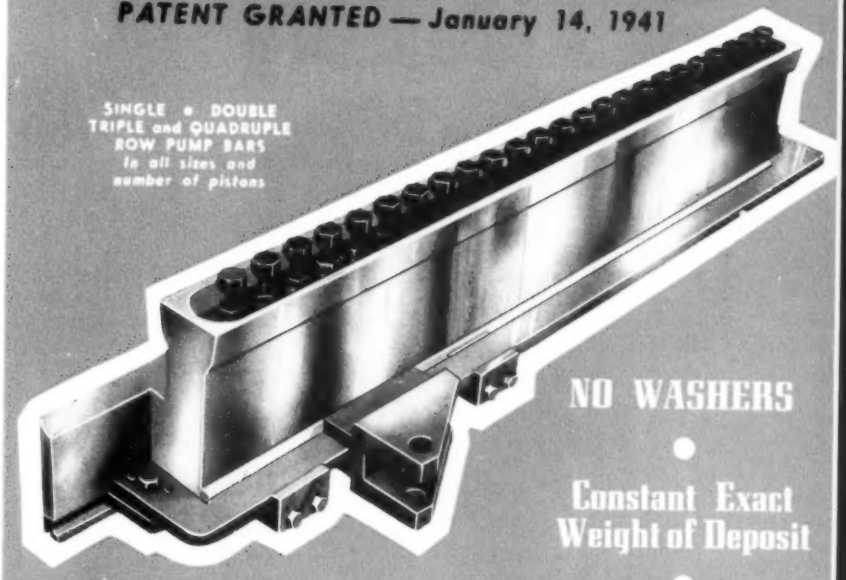
Presents

"HYDRO-SEAL" MOGUL PUMP BARS

PATENT GRANTED — January 14, 1941

The Hydro-Seal Pump Bar is only one of the newly patented National Equipment developments. Ask us about our new "Hi-Speed Precision Nougat Cutter."





SINGLE • DOUBLE
TRIPLE and QUADRUPLE
ROW PUMP BARS
In all sizes and number of pistons

NO WASHERS

•

Constant Exact Weight of Deposit

•

NO TAILINGS

•

NO SOAKING

•

LONG LIFE

The greatest improvement in Mogul casting work in years, a boon to the Confectionery Industry.

Some of the Products of
National Equipment Company

Enrobers and Coaters

Detailers
Automatic Feeders
Nut Feeders
Bottomers
Cooling Tunnels
Kihlgren Strokers
Bausman Decorators
Spindle Decorators
Chain Decorators
Temperature Controls
Turntables

Bon Bon Coaters
Chocolate Melters, 100-300-500-1000 and 2000 lb. sizes.
Continuous Automatic Chocolate Tempering Units, 3 column and 5 column.
Chocolate Tempering Tanks, 500 to 20,000 lbs. capacity

Moguls, Steel and Wood

Harmonic Motion Devices for Moguls
Pump Bars, single, double and triple row, all sizes.
Automatic Cherry Depositors
Depositors for Gum, Marshmallow, Jelly, Cream, one and two colors.
Simplex Starch Bucks, Steel and Wood
Cream Melting Kettles
Crystal Cookers and Coolers
Continuous Hard Candy Cookers
Nougat Cutters
Syrup Coolers and Cream Beaters
Steam Jacketed Kettles

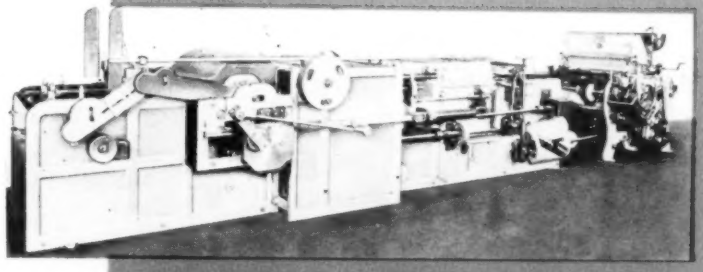
Chocolate Equipment

Bausman Disc Process for Liquor
Bausman Disc Refiners for Coating
Chaers, 6, 7 and 9 ft.
Chocolate Depositors, Shaking Tables and Cooling Tunnels
Paste Moulding Machines
Melangeurs
Triple Mills
Paste Mixers
Refiners
Cocoa Butter Presses
Cocoa Powder Outfits
Conges
Crackers and Fanners

PROMPT DELIVERY

NEWLY IMPROVED
WIRE BELTS

CANVAS BELTS
GRINDING DISCS
REPLACEMENT PARTS



HARMONIC MOTION AUTOMATIC STEEL MOGUL

NATIONAL EQUIPMENT COMPANY

153-157 CROSBY STREET — NEW YORK, N. Y.

Visit our **BOOTH No. 35** *at the N. C. A. Exposition*

Courtesy of The Warfield Corp.

Courtesy of Hershey Chocolate Corp.

CARVER COCOA PRESSES

are used

Throughout the Industry

May we serve you?

FRED S. CARVER
HYDRAULIC EQUIPMENT
345 HUDSON ST., NEW YORK

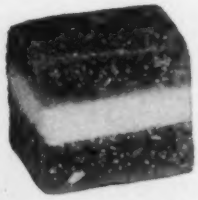
Courtesy of Rockwood & Co.

Courtesy of Blumenthal Bros.

SUCCESS WORTH HAVING IS WORTH INSURING

"Best Sellers" in the Candy Field Often Owe their Super-Quality and Popularity to White-Stokes Batch Control

Expert analysis of many super-fine Jellies provides convincing evidence that their delicious tenderness and appetizing freshness could only be had with WHISTO-JEL in the batch.



Prolonged freshness, inimitable clarity and melting tenderness of super-fine Jellies preclude any possible use of old-fashioned "starchy" methods. WHISTO-JEL in jellied Candy batches produces *"best sellers."*

MAKERS of many famous candy bars and packaged lines enjoy the benefits and advantages of White-Stokes Laboratory cooperation and scientific formulas for "best sellers" — but *names* are off the record.

Planning for and safeguarding pre-determined BATCH CONTROL, with super-quality and added-profit insurance that results from production standardization, obviously is confidential. Leaders in the candy industry bring many problems to us for solution secure in the knowledge that their special problems are not exploited.

BATCH CONTROL as here exemplified often marks the dividing line between waste or loss, and profitable popularity in big-scale production of many different types of candy. Backed by a proud record of 34 years' specialization in proved formulas and pure-food ingredients—you are invited to capitalize on White-Stokes laboratory facilities.

Write today. State which type or types of candy you make or plan to make this season, and a booklet describing this scientific service and recommended ingredients, will be mailed promptly. Simply address:

WHITE-STOKES COMPANY, INC.
3615-23 Jasper Place • Chicago, Illinois
Branches: BROOKLYN, N. Y. LOS ANGELES, CALIF.

Shrewd judges of super-quality "wrapped" or "stand-up" Caramels, need not be "tipped-off" that MILKEE-SOLIDS in the batches insured their delicious flavor and tenderness. Best Sellers in Caramels are thus made.

The extra smooth consistency of Cream Centers, (no matter under what famous name such confections are sold), very often are as an open secret — HANROL CREME was used in the batch.

White Stokes

SPECIALIZING IN PURE FOOD PRODUCTS SINCE 1906

- ☐ JELLIES
- ☐ CARAMELS
- ☐ CREAM CENTERS
- ☐ FUDGES
- ☐ ICED PIECES
- ☐ FRUIT CENTERS
- ☐ NUT ROLLS
- ☐ CANDY BARS
- ☐ NOUGATS

No-Obligation Request

WHITE-STOKES COMPANY, INC.
3615-23 Jasper Place, Chicago, Ill.

Without obligation, send booklet describing your service, formulas, and pure-food ingredients for the types of candy here indicated.

NAME.....

FIRM.....

ADDRESS.....

CITY..... STATE.....

Convention Programs--

National Confectioners Association
Palmer House, Chicago, June 2-5

Monday, June 2

Luncheon. Principle Speaker: W. J. Cameron, featured speaker of the "Ford Sunday Evening Hour."

Afternoon Session: Raw Materials Discussions

Chocolate Situation, by H. Russell Burbank, vice president, Rockwood and Co., Brooklyn, N. Y.

Corn Products, by Col. Geo. M. Moffet, president, Corn Products Refining Co., and director of the Food Division, Council of National Defense

Dairy Products, by Walter Page, consultant to the Dairy Industry.

Sugar Situation, by Ody Lamborn, Lamborn & Co., sugar brokers, New York, N. Y.

General exchange of ideas from the floor on Industry problems as seen in the five principal marketing districts of the country.

Tuesday, June 3

Morning Session: Raw Materials Discussion.

Oils, by P. C. Magnus, Magnus, Mabee & Reynard, New York.

Nuts, by Harold J. Clay, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C.

Carton and Findings, D. Clark Everest, president, Marathon Paper Mills, Rothschild, Wis. and consultant, Pulp and Paper Unit, OPM.

Address: "Confections in the Defense Program," by Lt. Col. Rohland A. Isker, Subsistence Research Lab., Chicago Quartermaster Depot, U. S. Army.

Luncheon Session

Introduction of Philip P. Gott, Past President Harry R. Chapman, presiding.

Address: "Marching Ahead," by Philip P. Gott, President, National Confectioners Association.

Afternoon Session: Production Forum Program

"Food Store Marketing and How to Develop It." F. W. Brinkman, Sales-Service Div., Ind. Grocers Alliance Distributing Co., Chicago, Ill.

"Housekeeping in the Candy Plant." Jack Rector, Peter Paul, Inc. M. H. Kronenberg, Chief, Div. of Industrial Hygiene, State of Illinois.

"The Employee Looks at Her Job." Helen Dudzik and Candy Manufacturers will hold a panel discussion.

"Budgeting Is a Production Problem." Henry J. Howlett, Secretary of the American Management Association, New York.

Wednesday, June 4

Morning Session: Management Session

Insurance, by I. C. Shaffer, Just Born, Inc., Bethlehem, Pa. and New York.

Credits, by Arthur L. Stang, Cracker Jack Company.

Taxes, by E. M. Kerwin, vice president, E. J. Brach & Sons, Chicago.

Report on Selling to Army Post Exchanges.

Labor Requirements under the Defense Program, speaker to be announced.

Employee Relations, by Otto A. Jaburek of the Chicago Employers Association.

Afternoon Session: Executive and Business Session

Thursday, June 5

Annual Golf Tournament, Olympia Fields Country Club, Olympia Fields, Ill. Will T. Reed, Reed Candy Co., Chairman of the Golf Tournament Committee.

Associated Retail Confectioners
Morrison Hotel, June 1-4

Sunday, June 1

7 p.m.	Registration
8 p.m.	"House of Friendship," Roosevelt Room

Monday, June 2

8 to 9 a.m.	Bugle Call Breakfast, Main Dining Room Informal Discussion Group
9 a.m.	Registration
10:30 a.m.	First Session President's Address Secretary's Report
11:15 to 12:15	"Tricks That Clicked." Members of A.R.C. only. Five-minute presentations by members
12:30 p.m.	Luncheon—Terrace Casino
2 p.m.	"Cost Accounting Applied to Manufacturing Retail Confectionery Business," J. J. Brennan, Mavrakos Candies, Inc., St. Louis, Mo.
3:30 p.m.	Presentation of Eight Window Displays for Various Special Sales Events, under direction of Tom Barron, Barron's, Framingham, Mass.

Tuesday, June 3

8 to 9 a.m.	Get-Together Breakfast, Main Dining Room
10 a.m.	Candy Clinic, Mrs. Ora Snyder, Mrs. Snyder's Candies, Chicago, Ill., presiding
1 p.m.	Luncheon—Terrace Casino
2:15 p.m.	Candy Clinic (Continued)
3 p.m.	"Ask the Experts," Question and Answer Session, with Anderson Pace as Coordinator. Experts: Mrs. M. G. Anderson, Maud Muller Candy Co., Dayton, Ohio; Herbert Dimling, Dimling's Candy Shops, Pittsburgh, Pa.; George Frederick, Busy Bee Candy Co., St. Louis, Mo.
8:30 p.m.	**Dinner Dance**

Wednesday, June 4

10 a.m.	"New Ideas in Tying Gift Packages," Mrs. Olive Read, Olive Read Creations, Los Angeles, Cal.
10:15 a.m.	Open Forum Discussion of Production Problems Discussion Leaders: James A. King, Nulomoline Co., New York; Geo. A. Eddington, Heinemann's, Chicago
11 a.m.	Unfinished Business Reports and Resolutions Election and Installation of New Officers
11:30 a.m.	Inspection and Distribution of Candy Clinic Candy
12 M.	Adjournment

* WRAP-O-MATIC

- WRAP-O-MATIC operates at high-speed regardless of texture of product —cuts production costs to the bone . . . economizes on material with savings as much as 35% in wrapper costs.
- WRAP-O-MATICS are designed primarily for single purpose high-speed production, but can be changed over to handle other sizes or shapes. They are built in two basic models . . . Side-intake for direct feed from enrober belt . . . Straight-intake for wrapping 2-piece and 3-piece bars, for soft or fragile products requiring minimum handling.
- Investigate WRAP-O-MATICS . . . have our engineers survey your wrapping problems. Let them show you how WRAP-O-MATICS will increase your sales and profits!

Manufactured by Us Exclusively . . .

THE *Miracle* CANDY WRAPPING MACHINE . . .

. . . that wraps *ovals, clusters, mounds,* and other *irregular shapes* . . . *hard* bars, *soft* bars, *brittle* bars, and *tender* bars. It forms, folds, and seals without pressure . . . with or without liners, with or without cards . . . uses Glassine, Cellulose, Revelation Wrappers, foil, the new heat-sealing papers, or any type of wrapper that can be printed in rolls!

ON DISPLAY IN BOOTHS 55 AND 56
CONFECTIONERY INDUSTRIES EXPOSITION • PALMER HOUSE, CHICAGO

MODERN EQUIPMENT CORP., DEFIANCE, OHIO

Directory of exhibitors--

Confectionery Industries Exposition During N.C.A. Convention, June 2, 3, 4, 5, at the Palmer House, Chicago

---

Note: The exhibitors listed in boldface type have further described their products in the Advertising Pages of THE MANUFACTURING CONFECTIONER.

AMERICAN MAIZE-PRODUCTS CO., 100 E. 42nd St., New York, N. Y. Booth No. 41.
In attendance: Wm. Ackerman, F. K. Benzing, J. R. Bishop, B. F. Buchanan, G. H. Bunton, R. E. Daly, D. K. David, F. C. DeLucia, R. D. Crury, R. E. Harmer, A. P. Hellwig, C. G. Linker, John Murray, I. A. Peterson, L. G. Preston, J. J. Robertson, Edwin Traisman.

AMERICAN SUGAR REFINING CO. and FRANKLIN SUGAR REFINING CO., 120 Wall St., New York. Booth No. 58.
In attendance: American Sugar: Joseph W. Mooney; Maurice B. Murphy, Western Sales Manager; William V. Toohey; Roland C. Byrum. Franklin Sugar: Walter E. Beard, Manager; Lewis E. Bridge. For both companies: Dr. Stroud Jordan, manager, Manufacturers' Service Division.

ANHEUSER-BUSCH, INC., Corn Products Div., 9th & Pestalozzi Sts., St. Louis, Mo. Booth No. 21.
In attendance: Homer F. Ziegler, Vice President; Harry C. Crist, Manager Corn Products Division; Charles H. Grupe, Sales Executive; J. T. Flahiff, Eastern Sales Manager; George Hines; Arthur F. Moeslein, Assistant Manager. Corn Products Division; Harry Best; H. Homer Clark; William Jaeger, Chicago Division Manager.

ARMOUR & CO., U. S. YARDS, Chicago, Ill. Booth No. 17.
In attendance: G. U. Vanneman, J. R. Taylor, G. W. Eddington, L. W. Houy, F. G. Wheeler, J. A. Morley, C. D. Wilbur.

ATLANTIC GELATIN CO., Inc., Hill St., Woburn, Mass. Booth No. 43.
In attendance: J. H. Cohen, H. W. Cochran, F. J. DeKnight

BASSONS, 57-02 48th St., Maspeth, New York, New York. Booth No. 48-B.

BEN MONT PAPERS, Inc., Bennington, Vt. Booth No. 68.
In attendance: D. C. Hurlbut, D. R. Sargent, Jay A. Cox, William Schiemenz, Theodore Lax.

BLANKE-BAER EXTRACT & PRESERVING CO., 3224 S. Kingshighway Blvd., St. Louis, Mo. Booth No. 62.
In attendance: Dr. Samuel H. Baer; Miller Winston; Albert H. Knese; W. L. Castle.

BRAZIL NUT ADVERTISING FUND, 60 Hudson St., New York, N. Y. Booth No. 1.
In attendance: T. R. Schoonmaker.

BURRELL BELTING CO., 413 S. Hermitage Ave., Chicago, Ill. Booth No. 34.
In attendance: Earl F. Mayer, President; Paul J. Buss, Vice President; John M. Moyer; Norman Coryell; Howard Aylesworth; Heber B. Fate; Harry Hallgren; Nick Schausten; Ross E. Forbes.

CALIFORNIA FRUIT GROWERS EXCHANGE, Products Dept., Ontario, Cal. Booth No. 27-28.
In attendance: M. L. Chapman, T. F. Baker, E. I. Rhoads.

CHOCOLATE SPRAYING CO., 2027 W. Grand Ave., Chicago, Ill. Booth No. 76.
In attendance: Leo Latini, Edmond Latini, J. M. Flynn.

W. A. CLEARY CORPORATION, New Brunswick, N. J. Booth No. 14-B.

CLINTON COMPANY, Clinton, Iowa. Booth No. 6.
In attendance: R. E. Clizbe, H. A. Bendixen. Geo. E. Corson, A. C. Junge, Mrs. Naomi R. Jensen.

CONFECTIONERS JOURNAL, 437 Chestnut St., Philadelphia, Pa. Booth No. 19.

CONFECTIONERY & ICE CREAM WORLD, 99 Hudson St., New York, N. Y. Booth No. 61.

CORN PRODUCTS SALES CO., 17 Battery Place, New York, N. Y. Booth No. 32.
In attendance: J. D. Buhrer, president; F. Mueller, vice-president.

CURRIE MANUFACTURING CO., 1837 W. Grand Ave., Chicago, Ill. Booth No. 15.
In attendance: Donald Currie, D. W. Currie, H. A. Currie, H. W. Currie, N. Fasoletos, E. V. Currie.

DECORATIVE ART GLASS CO., 314 S. Franklin St., Chicago, Ill. Booth No. 23.
In attendance: Paul Paisner, Wm. Dean, L. L. Schulz.

THE DOBECKMUN CO., 3301 Monroe Ave., Cleveland, Ohio. Booth No. 57.

E. I. duPONT de NEMOURS & CO., Inc., Cellophane Division, Wilmington, Del. Booth No. 9.
In attendance: R. R. Smith, promotion manager; L. B. Steele, B. C. Kobbins, W. T. Harde, E. M. Wallace, C. F. Brown, C. E. Lake, T. A. Shellenberger.

ECONOMY EQUIPMENT COMPANY, Inc., 223 N. Wolcott Ave., Chicago, Ill. Booth No. 66.
In attendance: J. Ross Murray, John Sheffman, G. T. Weick.

FOOD MATERIALS CORP., 2521 W. 48th St., Chicago, Ill. Booth No. 67.
In attendance: R. J. Rooney, E. E. Feight, P. T. Storr, E. N. Heinz, Jr.

HARRY L. FRIEND, 52 India St., Boston, Mass. Booth No. 33.
In attendance: Harry L. Friend.

GENERAL FOODS SALES CO., Inc., 250 Park Ave., New York, N. Y. Booth No. 4.

GREAT WESTERN MFG. CO., Leavenworth, Kans. Booth No. 65-B.
In attendance: P. L. Wilson, vice-president; E. C. Schroeder.

J. W. GREER CO., 119 Windsor St., Cambridge, Mass. Booth No. 18.
In attendance: J. W. Greer, F. W. Greer, S. W. Smith, Edw. M. Johnson, B. E. C. Gillette.

HARLICH MANUFACTURING CO., 1417 W. Jackson, Chicago, Ill. Booth No. 29.

THE HINDE & DAUCH PAPER CO., Sandusky, Ohio. Booth No. 69.
In attendance: Paul C. Meelfeld, R. M. Grunden.

THE HUBINGER CO., Keokuk, Iowa. Booth No. 70-71.
In attendance: R. S. Fisher, R. L. Krueger, J. H. McNamara, A. M. Robinson.

INTERNATIONAL CONFECTIONER, 80 Wall St., New York, N. Y. Booth No. 36.

A. KLEIN & CO., Inc., 113 W. 17th St., New York, N. Y. Booth No. 24.
In attendance: Joseph Ehrenfeld, William Michailes.

H. KOHNSTAMM & CO., Inc., 89 Park Place, New York, N. Y. Booth No. 46.

J. M. LEHMANN CO., 250 Broadway, New York, N. Y. Booth No. 30.
In attendance: E. E. Mueser, president; George Jack.

JAMES B. LONG & CO., 818 N. Franklin St., Chicago, Ill. Booth No. 73.
In attendance: James B. Long, Lawrence Jorgensen, R. E. Dempsey, Dr. C. F. Meibes.

THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill. Booth No. 8.
In attendance: P. W. Allured, O. F. List, W. C. Copp, E. Reinke.

MERCK & CO., Inc., Rahway, N. J. Booth No. 53.
In attendance: Messrs. Messersmith, Frantz, Rothermel, Dodson, Kohlar.

MILLER WRAPPING & SEALING MACHINE CO., 18 S. Clinton St., Chicago, Ill. Booth No. 16.
In attendance: R. H. Freeman, P. G. Freeman, W. R. Barich, J. L. Reynolds, F. J. Faletti.

MILPRINT, INC., 431 W. Florida, Milwaukee, Wis. Booth No. 2.

MODERN CONTAINERS, INC., Los. Angeles, Cal., Booth No. 51.

MODERN EQUIPMENT CORP., Defiance, Ohio. Booth No. 55-56.

NATIONAL EQUIPMENT CO., 153 Crosby St., New York, N. Y. Booth No. 35.

NATIONAL STARCH PRODUCTS, Inc., 820 Greenwich St., New York, N. Y. Booth No. 13.
In attendance: C. A. Gage, Milton J. Heim, John C. Clay, H. R. Fisher, R. A. Bailey. E. J. Murphy, S. B. Richardson.

NATIONAL SUGAR REFINING CO. of N. J., 129 Front St., New York, N. Y. Booth No. 12.

THE NULOMOLINE CO., 120 Wall St., New York, N. Y. Booth No. 5.
In attendance: M. E. Berrye, K. C. Fromm, T. M. Holicky, Jas. A. King, P. E. Minton, R. S. Taussig.

NUSSBAUM NOVELTY CO., 259 S. Jefferson St., Berne, Ind. Booth No. 39.
In attendance: N. Hemphill, V. E. Haecker, R. B. Haecker.

PACKAGE MACHINERY CO., 132 Birnie Ave., Springfield, Mass. Booth No. 10-11.
In attendance: Roger L. Putnam, president; G. A. Mohlman, vice-president; E. L. Smith, J. R. Tindal, Arthur B. Hull, E. G. Westervelt, Harold Mosedale, M. N. Allen, Paul Kyburg, T. A. Mohlman, William Kerber, Fred Taylor, T. L. Jefferson, Tom Miller.

PENICK & FORD LTD., Inc., 420 Lexington Ave., New York, N. Y. Booth No. 78.
In attendance: D. P. O'Connor, N. M. Kennedy, H. A. Horan, H. A. Harvey, O. H. Tousey, P. G. Wear, J. A. Kooreman, G. C. Callerman, O. W. Johnson, N. Vance, Jr., W. G. Ahern, A. F. Brooks.

CHAS. PFIZER & CO., Inc., 81 Maiden Lane, New York, N. Y. Booth No. 31.

THE PILLIOD CABINET CO., Swanton, Ohio. Booth No. 3.
In attendance: L. L. Pilliod, T. J. Pilliod, L. S. Feldman, Morris Gardner, Joe Leslie.

THE C. M. PITT & SONS CO., Key Highway & Boyle St., Baltimore, Md. Booth No. 14-A.
In attendance: Arthur C. Beall, George F. Reich, Hobart J. Thurber, C. R. Page, Paul A. Semrad.

ROSS & ROWE, 75 Varick St., New York, N. Y. Booth No. 77.
In attendance: J. Edward Rowe, W. F. Schlesinger, James P. Booker, James E. Lynch, Oscar M. Stout.

SAVAGE BROS. CO., 2638 Gladys Ave., Chicago, Ill. Booth No. 74.
In attendance: R. J. Savage, Sr.; R. J. Savage, Jr.; Robert E. Savage; R. W. Emerson; W. P. Halpin; M. J. Linden; O. E. Segrin; Wm. M. Owsley.

F. J. SCHLEICHER PAPER BOX CO., 1811 Chouteau Ave., St. Louis, Mo. Booth No. 47.
In attendance: Frank H. Schleicher, Frank H. Horning, Louis H. Schleicher. B. F. Fischer, Lawrence S. Schleicher.

SEYMOUR PRODUCTS CO., 535 Fifth Ave., New York, N. Y. Booth No. 54.
In attendance: E. M. Pletcher, W. H. Boxman.

A. E. STALEY MANUFACTURING CO., Decatur, Ill. Booth No. 42.
In attendance: C. H. Davidson, I. F. Wieland, F. H. Brock, Sam H. Ray, C. C. Hollis, R. E. Harroun, John A. Harris, H. J. Reavis. G. H. Batchelder, O. D. Sutter.

STEIN HALL MFG. CO., 2841 S. Ashland Ave., Chicago, Ill. Booth 38-B.
In attendance: B. W. Thayer, manager bulk foods dept.; Roger Dunn, manager sales promotion; Peter Rose.

SWIFT & CO., U. S. YARDS, Chicago, Ill. Booth No. 44.

SYLVANIA INDUSTRIAL CORP., 122 E. 42nd St., New York, N. Y. Booth No. 26.
In attendance: F. T. Helmer, A. J. Horgan, H. A. Hansen, K. K. Clorn, E. C. Nation, I. L. Thompson, R. M. Stockton, L. E. Nash, C. C. Carter.

TRIANGLE PACKAGE MACHINERY CO., 906 N. Spaulding Ave., Chicago, Ill. Booth No. 52.
In attendance: L. R. Muskat, Peter Muskat, W. H. Splitt.

UNION STANDARD EQUIPMENT CO., 318 Lafayette St., New York, N. Y. Booth No. 49.

UNION STARCH & REFINING CO., Columbus, Ind. Booth No. 50.
In attendance: W. R. Fetzer, D. Foster, P. R. King, H. W. Kinney, H. Lebeson, E. B. Pulse, P. H. Stambaugh, F. A. Witt.

VACUUM CANDY MACHINERY CO., 15 Park Row, New York, N. Y. Booth No. 25.
In attendance: Charles Austin, R. W. Bird, H. L. Brandenburg, Claude J. Covert, R. S. Hislop, J. C. Smaltz, C. B. Turner, Ernest J. Weig, Harry L. Woodruff.

VOSS BELTING & SPECIALTY CO., 5301 Ravenswood, Chicago, Ill. Booth No. 72.

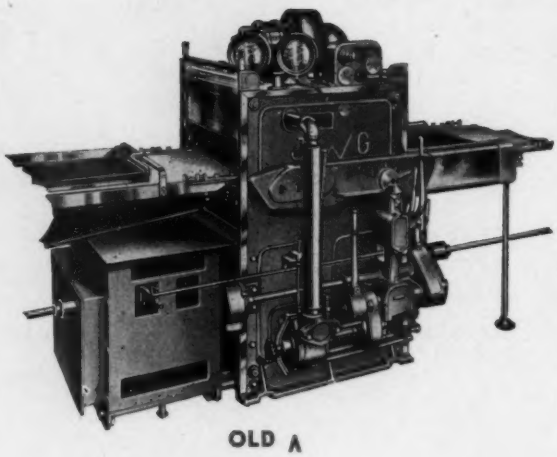
WARFIELD CHOCOLATE CO., 536 W. 22nd St., Chicago, Ill. Booth No. 40.

WAYNE NOVELTY CORPORATION, Decatur, Ind. Booth No. 75.
In attendance. N. R. Steury.

WEINMAN BROTHERS, 325 N. Wells St., Chicago, Ill. Booth No. 20.
In attendance: A. Weinman, M. Weinman.

JOHN WERNER & SONS, Inc., 713 Lake Ave., Rochester, N. Y. Booth No. 22.
In attendance: Charles Werner, Theodore Werner.

GREER PROGRESS



OLD A

For twenty-five years J. W. Greer Co. has maintained a unique position in the confectionery industry because of its strict adherence to a policy of building fine machinery, constantly improving it, and rendering the best possible service.

Greer machines have always been designed and constructed, not to meet a price, but to fulfill the need for machines which would do certain work faster and better than could be accomplished by other methods or machines.

One outstanding example of Greer progress during the past few years is illustrated here. Ten years ago the machine shown above was considered "tops" by the trade—

Now it has been replaced by the new Greer Streamlined Coater shown to the right. This machine has embodied in it many new features and improvements long desired by the more discriminating manufacturers.

NEW A

Greer Machinery Has Played and Is Playing An Important Part in Modernizing Plants All Over the World

It will pay you to Investigate the Improved Machines listed below:

CHOCOLATE COATERS **AUTOMATIC TEMPERATURE CONTROLS**
COOLING MACHINES **CRYSTALLIZING MACHINES**
COOLING TUNNELS **DEPOSITORS**
CHOCOLATE KETTLES **AUTOMOLDERS**
CHOCOLATE TEMPERING UNITS **TURNTABLES**

Also a Complete Line of Biscuit Machinery

J. W. GREER CO. CAMBRIDGE, MASS.

Chicago New York City San Francisco London

A Cordial Invitation

is extended you to join with hundreds of other candy executives, production superintendents and "the alert" men of our industry, and come to the 58th Annual Convention of the National Confectioners Association.

Visit us at Booth 78

The National Confectioners Association Convention

June 2-5, 1941 — Palmer House, Chicago

Penick & Ford Personnel:

D. P. O'Connor	H. A. Harvey
N. M. Kennedy	O. H. Tousey
H. A. Horan	P. G. Wear
O. W. Johnson	W. G. Ahern
N. Vance, Jr.	A. F. Brooks

G. C. Callerman

P&F PENICK & FORD LTD. INC.

420 LEXINGTON AVENUE • NEW YORK

Factory... CEDAR RAPIDS, IOWA

PLACTO · MIROSET · R&R SPECIALTIES · OROCO · Fine Flavors

LECITHIN HEADQUARTERS of AMERICA

Leadership

R. & R. SPECIALTIES

Since our first day of service to the Confectionery industry, we have accepted the responsibilities of leadership.

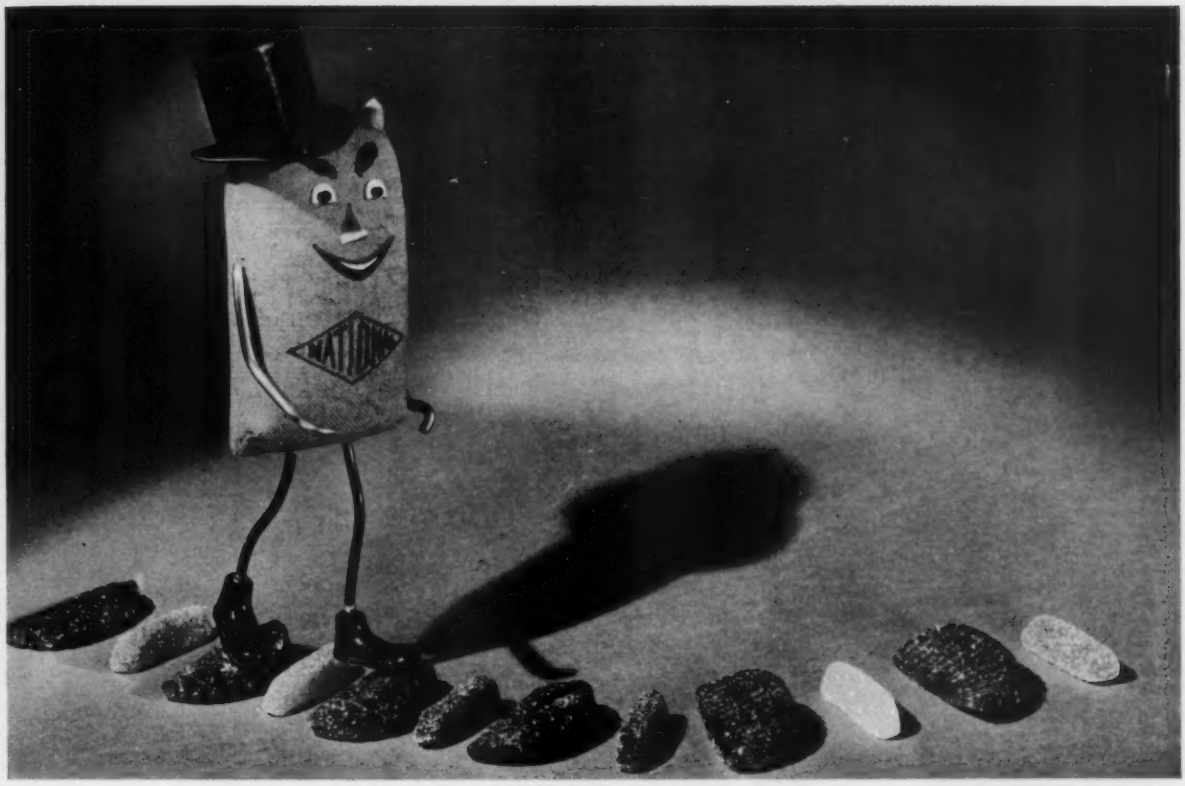
R & R Specialties must measure up to a high standard of quality, uniformity and practical value in candy making before being offered to the trade and then through constant laboratory control they are held to those specifications.

Our staff of practical technical men, combining scientific and practical knowledge and experience to every day shop practices, apply this knowledge and experience in solving the production problems of candy and chocolate manufacturers, right in the manufacturer's own plant if requested.

And we shall continue to keep in step with the progress of this industry—right out in front.

MEET US AT
CONFECTIONERY INDUSTRIES EXPOSITION
PALMER HOUSE
CHICAGO, ILL.
JUNE 2-3-4-5
DURING THE DAY—BOOTH 77
AND
IN EVENING—ROOM 796

ROSS & ROWE
SOLE DISTRIBUTORS
75 VARICK STREET NEW YORK, N. Y.
CHICAGO OFFICE—WRIGLEY BLDG.



Stepping Stones to Better Jelly Gums

New starches, with new and outstanding properties . . . made expressly for Jelly Gum work! National offers you these . . . and with them, valuable and practical new methods of using starches.

Higher "jell"—improved clarity—better chewing qualities—and longer shelf-life are readily obtainable with these starches.

We shall be glad to send you one or more trial bags on request. Our Confectionery Technicians will give you every cooperation.

Visit us at Booth 13 at the N. C. A. Convention, June 2-5, Palmer House, Chicago, Ill.

National Starch Products Inc.

820 GREENWICH STREET, NEW YORK

FOREMOST

IN THE PRODUCTION OF PURE VITAMINS

Discoveries and advances in the vitamin field made by Merck chemists and their collaborators have continually emphasized the outstanding rôle played by Merck & Co. Inc. in the development of these vitally important substances.

The following chronologic review briefly describes the contributions of Merck & Co. Inc. in making available many of these essential factors in pure form:

1934 — *Ascorbic Acid Merck (U.S.P.) was made available by Merck & Co. Inc.*

1936 — *Vitamin B_1 was synthesized in the Merck Research Laboratories.*

1937 — *Vitamin B_1 Merck (Thiamine Hydrochloride U.S.P.) was made available in commercial quantities.*

1938 — *Nicotinic Acid Merck (U.S.P.) became commercially available.*

1938 — *Vitamin B_2 Merck (Riboflavin) was the second pure crystalline vitamin to reach commercial production during that year.*

1938 — *Alpha-Tocopherol (Vitamin E) was identified and synthesized by Merck chemists and their collaborators in other laboratories.*

1939 — *Vitamin B_6 was synthesized in the Merck Research Laboratories.*

1940 — *Vitamin B_6 Hydrochloride Merck became available in commercial quantities.*

1940 — *Alpha-Tocopherol Merck (Vitamin E) was made commercially available.*

1940 — *2-Methyl-Naphthoquinone Merck, a pure chemical having marked Vitamin K activity, became available in commercial quantities.*

1940 — *Pantothenic Acid, the most recently synthesized member of the Vitamin B Complex, was identified and synthesized by Merck chemists and their collaborators.*

1940 — *Calcium Pantothenate Dextrorotatory, the physiologically active form of Pantothenic Acid, was made commercially available by Merck & Co. Inc.*

AN OPPORTUNITY FOR THE CONFECTIONER

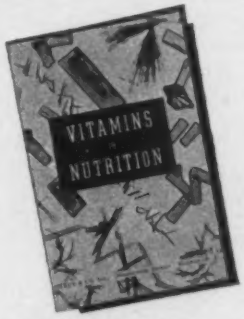
The wide interest created by the recent addition of Vitamin B_1 Merck to chocolate bars, has impressed confectioners everywhere with the importance of this vitamin and the tremendous opportunity for realizing increased sales through adding this nutritive essential to candy.

Consumers today are more vitamin-conscious than ever before, and the confectioner who improves his product with Vitamin B_1 Merck will add a new sales-compelling appeal. With vitamin B_1 now commercially available in *pure crystalline* form, troublesome problems of taste, odor, color, and bulkiness are completely eliminated.

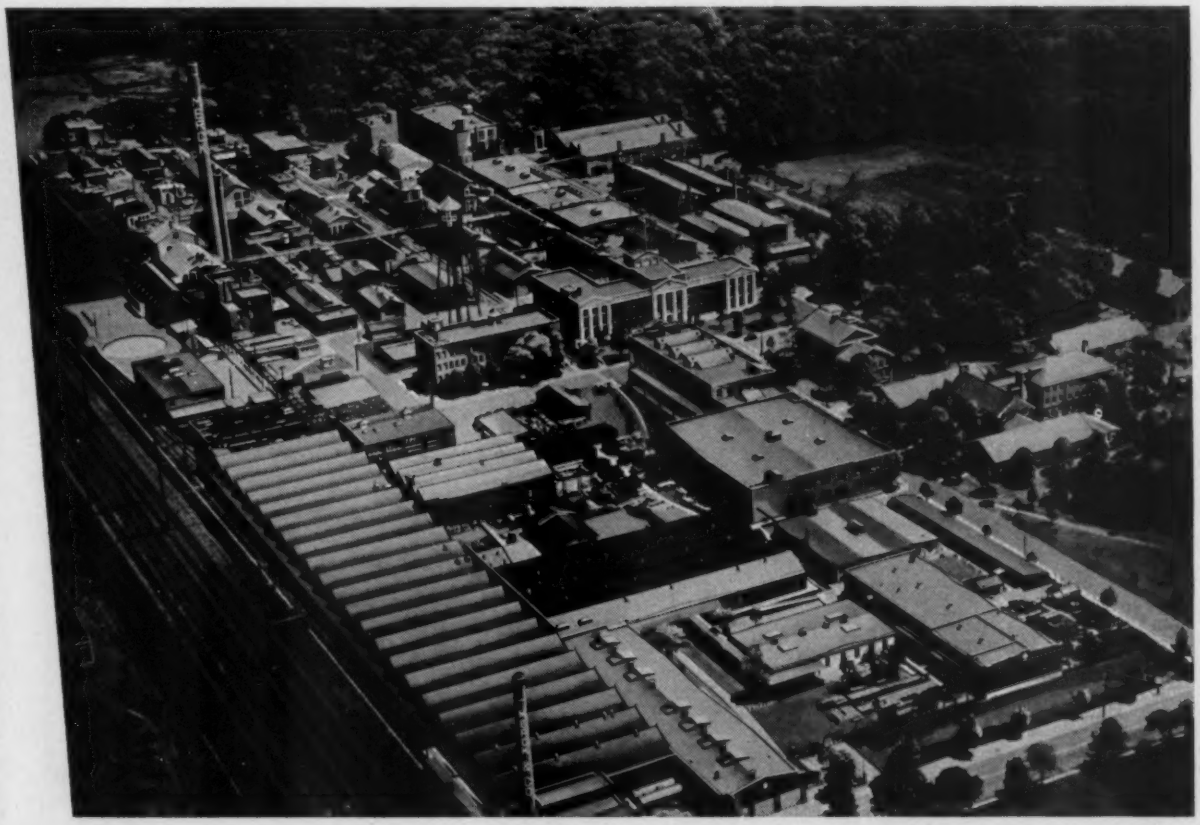
We suggest that you call us in today and learn how easily and economically vitamin B_1 can be incorporated in your product.

Our scientific staff and laboratories are prepared to serve you.

MERCK & CO. Inc. *Manufacturing Chemists* **RAHWAY, N. J.**
NEW YORK **PHILADELPHIA** **ST. LOUIS**
In Canada: **MERCK & CO. Ltd., Montreal and Toronto**



This up-to-date brochure, written in non-technical language, will be mailed on request.



For Better Flavor... Finer Texture... Repeat Sales

Use CLOVERBLOOM Spray-Powdered FRESH EGG WHITES

Repeat sales are what build business. Hundreds of candy makers have proved that Cloverbloom Spray-Powdered Fresh Egg Whites make creams and nougats that bring people back for more. The reason is simple: These superior eggs give candies finer flavor because they have a mild, natural fresh egg flavor themselves. They improve texture because of their greater emulsifying power. They make more appetizing aroma possible, because there's no off odor to cover up.

Why not get those repeat sales for yourself? Improve the flavor, texture and aroma of your creams and nougats. All you have to do is order Cloverbloom Spray-Powdered Fresh Egg Whites from your Armour salesman or nearest Armour Branch House, today!

BE SURE TO VISIT US AT THE CONVENTION!

We'll be on hand to greet you and tell you all about our product. Stop at the Armour Booth – No. 17—and say "Hello."

ARMOUR CREAMERIES • CHICAGO, ILLINOIS

Scientific Management--
A challenge to the confectionery industry

by GEORGE H. WILLIAMSON*

The development of industrial management and its meaning to the future of the confectionery business.

George H. Williamson

Mr. Williamson, a former president of the National Confectioners Association and prominent in the affairs of this and other business groups, is a keen student of Management and is unusually well-qualified to discuss this topic in terms of the past and future.

Looking backwards can bring happy memories or sharp regrets, but sometimes also it is the only practical reason for reviewing the past. Many things would be done differently if we could do them over again—but we can't. Many others wouldn't have been done at all if we knew then what we do today. But the trends of the past extend into the future and therefore deserve consideration and study.

Changes in management methods and thinking in the last 20 years are simply a continuation of the change that took place in the preceding 20 or 25 years. It can be said that these changes really started back in the "Gay Nineties" when Dr. Frederick Taylor studied bricklaying and discovered that if he could teach a bricklayer to quit flourishing his trowel and making other unnecessary motions, he would be able to lay more brick. This interested the more alert business executives and opened the door of Industry to the engineer. The engineer developed straight-line and mass production for Industry. The World War greatly accelerated this trend, but after the War the load of disposing of the increased output fell on the shoulders of the sales department and the sales departments of the country tried many devices to stimulate sales. For instance, we all remember the old days of the pep talks, when it was thought if only you could steam up the salesmen they would go out and break all records. This had its day and passed out. Others, to avoid paying too much excess profits tax in those days, commenced advertising where they had never advertised before and found, in many cases, that it served them well. But as soon as each step forward made by any unit of Industry was duplicated by other units of the Industry, improved methods were necessary to get ahead of competition again or to keep up with it.

At the end of the World War, another change began to take place. Businesses were sold to the public via the stock market, either singly or merged with others, and the new stockholders expected good dividends regularly. In the process, the stock broker or bankers paid themselves in stock, the old proprietor was well-rewarded for his success in the past and the result was usually a large amount of stock on which dividends had to be paid. In many cases the old proprietors took their money and retired, to live more or less unhappily ever after until death or 1929 took them. The new men who took over the management had to make greater profits than ever before to pay the dividends the stockholders expected, and also to earn the bonuses they were promised for successful performance. This required increased efficiency, and the so-called self-appointed "efficiency engineer" came into the picture, many times with half-baked theories and schemes. The real engineers, however, studied a business carefully when they were brought in and were able to suggest engineering methods and short-cuts which helped.

Difficult To Maintain Close Executive Contact

This carries us up to about the time THE MANUFACTURING CONFECTIONER cracked its shell and came into being.

Management, to be successful, must be able to extend its ideas and thinking down through the organization

* *President, Williamson Candy Co., Chicago, Ill.*

as far as possible so that its plans will be followed as completely as possible. In the large consolidations and the large companies, the Management found it difficult to maintain close enough contact with distant executives at all times and found it impossible to reach the sub-executives. This difficulty required still more devices for control which would develop proper understanding and adherence to policies, methods and principles. Many of these large organizations which were formed by a merger of a number of other smaller ones found the going pretty rough. Some fell by the wayside and many of the men put in to head them were unable to weld them into a smooth running whole because of a lack of proper control all down the line.

About this time one of the most important of modern management methods was developed by Professor James O. McKinzie, at that time with the University of Chicago. He adapted Governmental budgeting to industry and presented industry with budgetary control. This primarily could be described as accounting in advance of performance. All department managers estimated and forecast their activities for the coming period, either a month, six months, or a year. When the sales department had estimated its sales, it was possible for the production department to determine how much it would have to produce, the treasurer how much money would be required, and the office manager how many clerks he would need. Each then had a definite goal and naturally strove to reach it. Not only was this an incentive which helped Top Management by directing the eyes of each important cog in the wheel toward planned results, but also made these men give greater thought to their operations, made them consider each little activity and expenditure more carefully than they ever had before. Today budgetary control is an essential procedure with hundreds of companies which at first tossed it aside as impossible with the time-worn statement "Our business is different."

The Department of Commerce, under that able engineer, Secretary Hoover, started many studies which were helpful to industries in securing facts, such as the monthly sales figures which that Department still compiles and distributes to the candy industry. Studies in personnel work, industrial relations between employer and employee, were undertaken and proved interesting. Progressive industry accepted some of them, and the personnel manager was given a small part in the direction of business, but has been assuming more and more importance until today he is usually a vice-president, ranking equally with others. Rule-of-thumb executives in the plant were succeeded more and more by the trained engineering type of factory executive. Sales activities came under the microscope. Survey of cities, counties or whole territories were made to determine the possibilities for sales of individual products. Personal interviews with a cross-section of the population, studies of income, and questionnaires as to products in use, such as the number of refrigerators, farm tractors, etc., were some of the methods used.

"Line-and-Staff" Principal Tried

No executive can properly supervise the work and thinking of more than five or six other executives. The head of one of these new large organizations had his hands more than full attempting to direct a production manager, a personnel manager, market research, and various other enlarged activities which were found necessary to maintain a competitive position. The Army line-and-staff principle of administration was tried and adopted. A staff executive is on a par with an operating executive, such as the sales manager, production, production manager or office manager, but has no authority over any one other than his own subordinates and assistants. Line executives didn't take kindly to the staff executives and there is, and always will be, conflict between them, but the degree of harmony and cooperation existing is almost a measure of the success and progress of the organization. The personnel department, the engineering department and the research department are examples of staff activities. They study, plan and propose, but do not carry out. This carrying out or executing is the job of the line or operating executives such as sales, production, etc.

Came the depression, the New Deal, Unemployment Relief and the theory that production should be for use and not for profit. Came the N.R.A. and its 7b clause reaffirming the principle of collective bargaining, and in turn was followed by the Wagner Act and the Labor Board. The whole philosophy of industry was changed, not overnight, but inch by inch as pressure forced it to change. Some of this changed thinking and philosophy is fundamental. Some of it will be tried and some of it will be discarded, but much of it will remain and be refined. Many executives have not yet accepted these new viewpoints about the purpose of industry, its relative importance in the scheme of things and its rights, but gradually it will become necessary for them to adapt themselves and change their thinking, or else fall by the wayside. It is a tide which cannot be resisted completely, or forever.

Changes Which Have Taken Place in Management

Now to review the changes in management, methods, thinking and procedure, let's consider the top executives, the Management, as the hub of the wheel and the various departments or divisions of industry as spokes radiating from it, and consider some of the major and minor changes which have taken place in Industry as a whole, as well as in the candy industry.

Let's take Production. Mechanization, the principle that anything which can be done by hand can be done by machines, has had a tremendous effect on Management and employees. In our own field, for instance, the thirty-two inch enrober, steel Moguls which could be speeded up effectively, and wrapping machines have changed lay-outs, operations and increased production. Air-conditioning, the cooling of chocolate-dipped goods in tunnels instead of on plaques in cold rooms, have given a degree of straight-line production. Cellophane has brought its problems and benefits. Corrugated cartons have succeeded wooden cases. Time and motion studies of operations and departments have an important place in the metal trades and many other industries, but are just beginning to be tried and adopted in the candy industry.

Along the Industrial Relations spoke of the wheel, we have minimum wages, maximum working hours and collective bargaining. Improved working conditions, such as proper lighting and ventilation, have been found profitable. Rest periods, and in some cases reduced hours of work have maintained top production or even increased it. Aptitude tests have been developed and aid production management in selecting the right person for the job. Job rating has been very successful in

keeping the employee certain that he is getting the proper wage for his work. Merit rating for the individual employee has made him feel that his worth is known and recognized, that he isn't lost in the crowd. Foreman training is creating better understanding between the supervisor and his workers and reducing disputes and dissatisfaction.

Purchasing, as well as selling, has been affected by the Robinson-Patman Act. Hand-to-mouth buying has increased the responsibility of the purchasing department as well as the traffic department. Forbidding secret discounts and special allowances has changed the complexion of purchasing to a great extent, and in some respects, simplified, and in other respects, increased the work of this department.

The Office has found its activities increased by the Social Security Act, the Wage and Hour Act, the multitude of reports required by the S.E.C. and other Federal departments. Its work has been speeded up by machine bookkeeping, calculating machines, tabulating and sorting machines, as well as by the teletype in some particular industries with many branches. Cost accounting has been refined and made much more exact. Even envelopes are no longer opened, sealed and stamped by hand.

Marketing has been profoundly affected by advertising both to industrial customers and to consumers. Years ago we bought ball bearings, rope and paint on our dealer's recommendation. Today we buy so-and-so's products by name as a result of persistent advertising. In our own field, detail work. free deals and advertised brands have changed the problem of selling and affected our whole distribution structure. Fancy packages have declined in importance. Retail chains have absorbed much of this business. The rise of bars and the demand for all products in package form has had a tremendous effect upon the distribution of bulk candy. No longer does each drug store and candy store sell from a scale. Several hundred general line factories selling directly to the retailers in a few counties or states have dried up in the last 20 years, unable to meet the competition of the jobber handling more generally known brands of bars, penny goods and packages.

Products and Market Research are the backbone of many industries but as yet have not attained any great foothold in the candy industry. In the last 10 years Industrial Research departments have increased from a comparative few to some 1800 and the number is constantly growing, as one company after another in an industry is forced to start research in order to keep up with its competitors. One business executive recently stated that in 1939, 37% of his business was done on products developed by the research department in the preceding 10 years. The candy industry will do well to consider research in production as well as in marketing.

Twenty years ago, and previously, Management usually was vested in the person of the owner of the majority, if not all, of the stock of the business. Today, far more frequently it is vested in men who may own little of the stock of the business but who, by their knowledge of organization principles, ability to direct, vision and open-mindedness have made management almost a profession, men who, step by step, are changing business from a matter of shrewdness, rule-of-thumb practices and common sense to the exactness of a science.

It is said by many that business has failed, failed to employ all the employables, failed to realize its social obligation. Certainly it has failed to keep the public informed as to its remarkable advances and achievements, its problems and its aims and objectives.

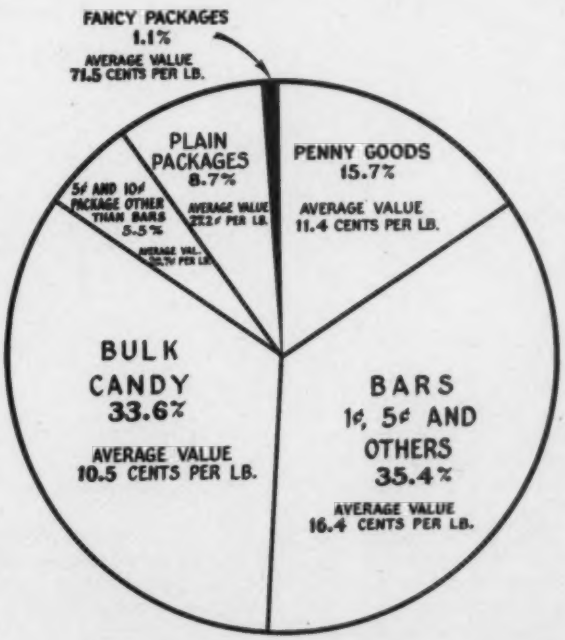
Associations Gird For Tax Fight

Representatives of the National Confectioners Association and the Associated Retail Confectioners of the U.S. appeared before the House of Representatives Ways and Means Committee on May 5, to present reasons why Candy should not be included for taxation unless other competitive products in the food lines are similarly taxed. To plans for raising the money to meet the outlays demanded by the legislation passed for defense and aid to England have been suggested—one by the Treasury department, and the other by Colin Stam, chief of the Joint Committee on Internal Revenue Taxation. The Treasury Department would raise part of the required money by excise taxes from a long list of sources, and candy and chewing gum are listed to produce 3.6 million annually through a 5% tax. In addition, the Treasury Department would also levy a tax of 5c a pound on Cocoa and 1c a pound on Sugar, Cocoa to bring an annual total of 30 million and sugar a total of 69 million.

Harry R. Chapman of the New England Confectionery Company Company, acted as chairman of the N.C.A. committee and presented a prepared statement in which the industry's declining profit trend was stressed. The statement also dwelt at some length on the food idea of candy in terms of modern life and modern standards of dietetics, and the importance given it in the Army training program. Candy as a large market for farm products was also stressed. Supporting the statement, a series of exhibits were presented, among them a large sign on which were listed the principal raw materials and farm products used in candy; a chart showing the relative importance of candy sales by type and class (illustrated herewith); an exhibit of some of the sweet foods (non-taxed, and not listed for taxation on the proposed schedule) competitive to candy; and an exhibit of type "C" and type "D" U. S. Army rations.

Brief oral statements were also made by W. E. Brock,

(*Turn to page 66, please*)



A Symposium - -

Yesterday, today and tomorrow in the industry

Costs as Important as Ever

by HORACE S. RIDLEY
President, New England Confectionery Co., Cambridge, Mass.

AS WE look back over the past twenty years in the candy industry, I believe to all of us comes the conviction that our problems have not been simplified. On the contrary, the conditions under which all business operates have changed and the entire pattern of business in the last ten years, at least, has been unlike any other period of business history. Not only were conditions and the rules of doing business changing from day to day, but the conditions and rules for each tomorrow were unpredictable. During this time it was no longer possible to look back on the records of previous years to see what had been done under similar circumstances, because there were no similar circumstances.

Twenty-five years ago in the candy industry it was a simple matter to sell goods and make a profit. The whole picture was pleasantly lacking in so many of the complexities that have become part of our business operations today. Consumer goods had less distraction from other types of consumer spending, whereas today innumerable attractions from all sides compete for the spending money of the average consumer.

One of the basic fundamentals which grows in importance and which sometimes in periods of confusion gets lost from sight, is the need in any business, to know the cost of doing business and to watch for a reasonable profit. For with a reasonable profit a business can afford to maintain high quality standards in its goods and service, from the jobber to the ultimate consumer, thus perpetuating a reputation for dependability as a source of supply.

We are today in a situation where

Horace S. Ridley

the emphasis is being placed on defense production. Business generally does not expect to make profits out of defense and will be glad to avoid outright losses. Therefore it is from the overall profits on our domestic business that the cost of defense must be paid. Perhaps we cannot have 'business as usual' but we should have 'business with adjustments' and at customary profits. Without profits even the earnings of labor fall off because of shortened hours. Without profits our whole enterprise system will be threatened and many of the social gains of recent years will be lost. We must therefore make *profits through sales* our chief objective and the first fundamental as applied to our industry is a program of better merchandising in our domestic selling. The elimination of free deals and other price concessions on what should be the right economic price is a good first step.

50th ANNIVERSARY

by LEON SWEET
President, Sweet Candy Co., Salt Lake City, Utah

CONGRATULATIONS upon the 20th anniversary of your outstanding publication, THE MANUFACTURING CONFECTIONER. I have watched its growth and development with a great deal of interest.

My best wishes for the continued sucess of your publication.

You asked me to write a brief resume of the progress in the industry as it appears to me.

This year I will celebrate my 50th anniversary in the confectionery industry, where I started in Portland, Oregon, in 1890. I was grub staked to the extent of $1,500.00 by the late Louis Saroni who operated the first steam candy plant on the Pacific Coast in the year 1876. In the early days of California a steam candy factory was a novelty.

The writer started in the candy business in the horse and buggy days, driving a wagon around the streets of Portland and vicinity, selling candy. It was tough sledding in the winter months through the snow, rain and the slush.

I remember quite distinctly the panic of 1893 when about twelve banks closed in Portland, Oregon. We had an occasion one Saturday to need $200.00 to meet our payroll so we adjourned to the First National Bank and asked for a loan of $200.00 for ten days, which the president of the bank declined to grant, claiming that we owed them $200.00 at the time and that was our limit.

What a transformation has taken place in the candy industry in 50 years. Hard candy was cooked over the open fire and in a very few important plants with a vacuum pan. Marshmallows were all cast by hand from a cloth bag. Gum work and

creme work were deposited in starch by runners. Caramels were all hand wrapped. There were no chocolate dipping machines half a century ago. The vast tonnage that is being dipped today by modern dipping machines was undreamed of 50 years ago. There were no 5c bars, in those days, no 2 for 5c bars, no 3 for 10c bars, no free goods, no prepaid freight, no freight allowances. The penny goods line was very limited and consisted of Butter Rolls, Butterscotch, Marshmallow Bananas and a few other marshmallow items. Our present all day sucker was just a twinkle in one of the manufacturer's eyes. There were no pool cars, no stopping in transit cars. Sugar was about 10c a pound and the cheapest priced chocolate coating was about 20 odd cents a pound. A firm doing a volume of $500,000 a year was looked upon as an industrial giant. There were very few package goods sold in those days. Lowney stepped to the front at the world's Columbian Exposition featuring his package goods.

Well, those were great days, we had no automobiles, no streamline trains, no radios, no moving pictures and very few telephones. No excise taxes, no surtaxes, no income taxes, no excess profit taxes, no A.A.A.—C.O.D. —X.Y.Z. and all the other bureaus which take in every letter of the alphabet. No night clubs, no jazz bands, no swing bands, no torch singers, no Quizz Kids (just plain every day kids who made good when they grew up to manhood and womanhood). 50 years ago we had no Federal Trade Commission, no Sherman Anti-Trust law, no gasoline stations, no rubber neck wagons, no lip stick, no rouge and our grandmothers looked very sweet and charming in those days without any addition to nature's charms.

Those were the good old horse and buggy days when you could take your best girl out on a Sunday afternoon, buy her an ice cream soda and she would come home happy and report having had a wonderful afternoon.

Since 1936 these have all been gradually and unsuspectingly entering into the cost of doing business. Through mass production—labor saving devices, and various other ways this cost has been absorbed by many but it has now reached the point where further mounting costs of this nature must reflect themselves in higher selling prices, otherwise profits will materially suffer.

CANDY A FOOD

by W. C. DICKMEYER
Wayne Candies, Inc.,
Ft. Wayne, Ind.

IT is a great pleasure to congratulate THE MANUFACTURING CONFECTIONER upon this your twentieth anniversary.

There is so much information with reference to candy extant, that a publication which disseminates it and makes it available for all, is indeed, a blessing to the industry.

The candy industry is now developing into a large-scale production industry and also specialization, tending to reduce costs and making candy available to more people and at a lower price.

Then too, candy has come to be recognized as food—wholesome food. This has perhaps been the greatest advance that has been made and has resulted in multiplying the volume of sales.

With continued education such as your good publication has been providing and with a strong trend toward better quality in candy, the per capita volume of consumption should grow substantially in the years ahead of us.

We wish you continued success in the good work that you are doing.

COSTS INCREASE

by V. L. PRICE
President, National Candy Co.,
St. Louis, Mo.

THERE are so many uncertainties ahead of all business that no one can predict their effects upon the future, so that it seems the best rule to follow is to each day act wisely and cautiously and don't commit yourself today where you can't see

V. L. Price, Former President, National Confectioners Association

the road ahead of you and what is coming your way.

There are three things you can depend upon with certainty to be definitely in the future—they are: Increased Taxes, Expenses, and Wages.

INDUSTRY "OF AGE"

by C. C. CHASE
President, Chase Candy Co.,
St. Joseph, Mo.

TWENTY years ago the candy business was booming, particularly in our section. There were a large number of comparatively small manufacturing units, each one of them making money, and optimistic of the future. Gross margins were large on practically all items, and if a manufacturer didn't make at least ten percent net on his sales, something was surely wrong.

Five-cent bar goods were just coming into their own, but very few were well established with the exception of Hershey bars. Each manufacturer made from twenty to thirty kinds of 5c bars, ordering wrappers in small amounts. A large percent of the bars then were sold direct to the retail trade by the manufacturer, at 80c or 85c per box for 24 count. In short, business was more localized, and in our immediate territory, there were seventeen general line manufacturers traveling men direct to the retail trade.

A few of the most far sighted manufacturers saw the possibilities of national distribution of 5c candies, and gave larger values than others were giving, of similar combinations, together with some advertising and detail work. The scramble for the market on bars was on. Many firms had serious financial troubles during this period, but those who stayed in and made these big values, reduced the cost by mass production, and the volume also reduced their selling cost. They made money, and killed most of the bars, smaller manufacturers were distributing in a local way.

Bulk candy was not up to the present high standard of appearance

or eating quality. Nearly anything that looked and ate fairly well would sell. In this field too, manufacturers with a vision improved quality, and reduced prices on items on which they wanted a large volume, to make it increasingly difficult for the small manufacturer without automatic machinery. The factories that are larger now, bought labor saving equipment, and developed a great deal of their own, to get an advantage on their competitors. One by one the smaller manufacturers in our section went out of existence, or scaled down their field of operations to a marked extent. Today, there are comparatively few manufacturers west of the Chicago district, and the business is more in the hands of larger, better equipped factories.

This process of evolution is not applied to the candy business only, as in this same space of time a similar evolution went on in the automobile, the rubber tire, the cigarette and many other industries. It is now becoming a battle of the giants.

The public has benefitted from this in higher quality and better looking candies. All candies offered for sale now are pure, and most of them extremely reasonable in price. We feel that those who have weathered this storm of depression and the evolution of an industry have an excellent chance to stay in business and grow in the future. The candy industry is now in long pants, and has almost "come of age."

"DEEP INTEREST IN CANDY INDUSTRY"

by M. H. LOWENSTEIN
Vice Pres. and Gen. Mgr., Norris, Inc., Atlanta, Ga.

May we take the occasion, on the Twentieth Anniversary of your fine magazine, to congratulate you and thank you for the deep interest you have taken in the candy industry.

Your studious work on our behalf has brought fine results. Each month we read with interest your many articles and give great attention to the advertisements appearing on your pages. We know that you secure the services of experts to do your research work and solicit as clients only the most representative firms.

Be assured you have our continued good wishes and thanks for the services you have rendered us.

Service to Retail Manufacturers

by JOHN MAVRAKOS
President, Associated Retail Confectioners of the U. S.

I want to take this opportunity to convey to you sincere congratulations upon your 20th Anniversary of service to the Confectionery Industry.

Through your publication, THE MANUFACTURING CONFECTIONER, you have rendered a great service to the retail confectioners at large. The informative articles contained in each issue bring a wealth of knowledge to the individual scanning its pages, and keeps one constantly apprised of new methods and improvements in the industry.

It is an excellent publication and one worthy of much praise.

The Packaging Clinic conducted by you is in itself a most outstanding service.

Great Change from the Old Days

by A. L. NORRIS
President, Norris, Inc., Atlanta, Ga.

I suppose I'm one of the oldest manufacturers of high grade candies in the United States. In 1883, when I was a small boy, I started working in the candy business, and in 1908, I went into business for myself, which was incorporated in the year 1910.

In the old times, making candy was really hard work. We went through many difficulties to produce edible candies. I have loved the candy business all my life, and have tried to keep abreast of the times. Each piece of candy had to be cut and dipped by hand. We did not have such conveniences as hand roll machines and enrobers. The shelf life of chocolate was at a minimum. It could not withstand the changes of climate that long distance now necessitates. Preservatives were unknown, methods of cook and rapid turnover was the only thing that assured a customer of a fresh box of candy. Improvements in our methods of manufacturing and in our machinery have constantly been made and we now have one of the most up-to-date candy manufacturing plants in the entire South.

I can think of no other business that has gone forward any more rapidly than the high grade candies.

We operate our plant by issuing formulas, compiled by the writer, for every batch of candy made, and I personally supervise each batch as it goes through the entire plant.

Your MANUFACTURING CONFECTIONER has given me many very interesting and helpful points. I have been a subscriber ever since your first publication.

Production Methods Improved

by FRED W. AMEND
Fred W. Amend Co., Chicago, Ill.

Congratulations on twenty years of excellent service to the Industry!

Recognizing the importance of well informed production men, or superintendents, to the Industry, as well as the ever-increasing problems confronting them, your publication seems to have consistently offered a course of "self improvement" to those ambitious men willing to make the effort.

The Industry has advanced very rapidly since the first issue of your publication. While the old staples still persist, methods and formulas have changed greatly. Judging by the increased volume they must have changed for the better.

The result is that today a man taking charge of a factory as production manager must be familiar with, among other things, subjects such as labor relations, chemistry, and the latest developments in production machinery.

Fortunately the Industry has been and is being advanced by the intelligent efforts of suppliers of every kind. An example of this is the Confectionery Industry's Exposition held each year in conjunction with the National Confectioners' Association Convention. At that time superintendents have an opportunity to familiarize themselves with the most recent developments, and meet with those men whose service to the Industry is solving problems which daily confront the key men in our factories.

Sugar - -

A twenty-year endeavor to be helpful

by DR. E. WHITMAN RICE*

The past two decades have produced no spectacular developments in Sugar, yet there has been progress of importance to confectionery manufacturers.

E. Whitman Rice

An attempt to set forth progressive developments in sugar with particular consideration of its application in the confectionery industry may apparently indicate that the striking innovations are few, but one must remember the long history of growth and development which precedes by several centuries the recent 20 years which we are contemplating. With this proper adjustment of viewpoint, every slight improvement may be considered a real accomplishment and an indication that the sugar industry has a will to progress and to maintain its prominent position in the food commodity field. Many years ago, sugar refiners worked out the problem of large production at low cost. This problem is just beginning to be solved in many branches of the food industry. Attempts to solve this problem are particularly apparent at this time in the confectionery industry, and many of the changes which have taken place in sugar have been due to the changes in methods and operations by the candy industry in the development of large-scale, reduced-cost production where the changes in production methods have made improved and modified sugar products a necessity.

Physical Condition of Sugar Changed

Because the purity of refined sugars has for a long time been so high, it has only been necessary to change the form or physical condition in which the sugar has been produced. The simplest of these recent changes has been the production of a number of grades of very uniformly sized crystals which are largely required for sanding purposes. It is very expensive to produce crystallized pieces with the necessary tanks and time-consuming process, and sanding has almost entirely superseded the former large volume of crystallized goods. While, undoubtedly, crystallized goods stand up longer than sanded goods, the fact that it is possible to sand and even steam and dry as a continuous operation so quickly and cheaply, it has become widely accepted. The size of the grains of sugar required will naturally vary considerably with the size of the piece to which they are to be applied and the manner in which they are handled, and the refiners have installed considerable expensive equipment in their willingness to supply just the required type of sugar. The ancient idea that syrups made from brilliant crystals of sugar would recrystallize again into crystals of superior brilliancy is, of course, not true, and the moist types of brilliant grained sugars, such as Brilliant A, have almost entirely been supplanted by dry sugars which are, in fact, almost as brilliant.

While brilliant crystals are not required in the production of syrups for crystallizing, it is quite possible that brilliant grains applied to sanded pieces produce better finished goods when the surface which is actually in contact with the piece is smooth and shiny. This seems to be true even though the crystals are later steamed and dried.

Bulk Transportation More Economical

Probably the simplest recent development has been the transportation of sugars in bulk in special tank cars and in special trucks. This development is particularly important during this war emergency, because the economic loss in the cost of the sugar bag, as against its second-hand value, is more appreciable today than it has generally been in the past, and the ease of conveying sugar up stairs with a bucket elevator and distribution by gravity to the required points of use has a considerable part of the advantage which is obtained from the use of sugar syrups or "liquid sugar." Broadly speaking, almost all of the hard candies produced in and about New York and Boston are made by the use of liquid sugar, and this product has so great an appeal, due to its ease of handling and clarity of solution, that users have stated that they would prefer to forego the customary lower price rather than give up the convenience of this liquid material. If you add to the convenience a substantially lower price, it is very easy to see why such large quantities are used wherever it is obtainable.

The desire to gain the simplified handling and other advantages of liquid sugar has prompted some attempts

* *National Sugar Refining Co., New York, N. Y.*

to develop small refining units for its production, but this has not seemed to result satisfactorily, to date, and to one who knows the many things which can happen in any sugar refinery, large or small, it seems rather foolhardy to attempt any degree of refining without the benefit of chemical control as well as competent engineering assistance and experienced supervision. I do not believe it any more reasonable to attempt to refine sugar on a small scale without proper control than it would be to set up a small blast furnace to produce your own iron or a small oil refinery to produce your own lubricating oil and gasoline. From my own experience I can state that either one of the last two operations are basically as simple as the production of refined sugar, and it has also been pretty well established that a sugar refinery producing less than 200 tons of refined sugar daily is not an economic unit. Possibly, under some conditions, a plant could operate to produce 100 tons of sugar per day, but it would require that all conditions of situation and operation be extremely favorable to make it economically sound.

There has been a considerable increase in the use of invert sugar as the trade has gained better comprehension of its properties as well as its limitations, and this expansion of its use will probably increase as time goes on, because it is our most efficient stabilizer of moisture-content, due to the levulose content of the invert sugar.

The large distribution of compressed mints and of small die-formed hard candies has called for specific types of sugar and particularly, for sugars of extreme purity when the white or colorless pieces are produced.

There has also been a tendency toward ultra-fine powdered sugars which may be made into fondants, etc., merely by a mixing process, and thereby excluding the otherwise expensive job of dissolving, cooking, cooling, and beating to obtain fondants which must undergo the added operation of remelting when used. Here again Mother Nature injects her limitations, and a powdered sugar sufficiently fine to produce a fondant comparable with the cooked fondant must be very fine indeed, and this fineness must extend to every single particle, because, where remelting is required for depositing, there will be some dissolving of the grains of sugar and, naturally, in a machine-powdered product there will be particles of a great variety of sizes, and the finest will melt first. Later, this melted sugar will crystallize out again and it will naturally crystallize more rapidly upon the coarser particles present so that any grains which are large at the start will be still larger when the final fondant has arrived at a balanced condition. It is remarkable how few small palpable particles are required to be present to produce an apparently very coarse and gritty product.

This résumé should have been written by some one who had slight knowledge of the sugar business, because I have been continually tempted to launch forth into a complete exposition of the really innumerable ways in which sugar has been of help in developing the truly astounding distribution of candy, and you will admit, I am sure, that basically the existence of this sweet substance has been the foundation and greatest building material in promoting the growth of candy consumption.

Perhaps we can best close with a little caution against the faddist who looks first for vitamins and such, and inform him that it now appears that sugar is the primary substance from which much of our bodily substance is constructed and advise him to wait a bit before letting our present only partially informed ideas rob us of this most delightful food substance.

Bibliography

of Technical Articles on Sugar appearing in
THE MANUFACTURING CONFECTIONER 1921-1941

Physical Properties of Sugar. Frederick W. Murphy.
True Determination of Sugar Value: Weak or Strong. June 1921
Manufacturing Value. July 1921
Methods of Testing Comparative Strength. Sept. 1921; Nov. 1921
Invert Sugar. Jan. 1922
Crystallization. Feb. 1922
Fermentation. April 1922
Intelligent Manipulation of Sugar. May 1922
Action of Sugar with other Materials. June 1922
Method of Making Invert Sugar. July 1922
Losses in Candy Boiling. Dr. A. P. Bryant. July 1921
Inversion of Sugar in Candy Making. Dr. A. P. Bryant. April 1922
Relative Sweetness of Invert Sugar. W. W. Skinner and J. W. Sale. Nov. 1922
Value of Decolorizing Carbons to the Manufacturing Confectioner. Stroud Jordan. Nov. 1922
Some Causes of Off-Color in Sugar Products and Their Prevention. Stroud Jordan. Dec. 1922
Between Raws and Refined. A. A. Lund. Sept. 1924
Averaging Costs with Low Priced Sugars. A. A. Lund. Feb. 1925
Using Sugar Futures to Fix the Cost. A. A. Lund. Nov. 1925
Candy Test for Sugars. J. A. Ambler. Jan. 1927
Turbidscope for Testing the Quality of Sugars. K. L. Dern. April 1927
There Are Sugars and Sugars. Herman Lebeson. May 1927
What Constitutes a Strong Sugar. A. A. Lund. Feb. 1928
M. C. Survey of Competitive Refined Sugars. R. Randolph. June 1928; Aug. 1928
A Factory Super Becomes Acquainted with the Family of Sugars. Norman W. Kempf. Dec. 1928
White Syrups from Raw Sugars. Stroud Jordan. Jan. 1929
Some Properties of Cane Sugar that Effect Candy. L. Lang. June 1931
Sugar—A Series of Articles. A. B. Kennedy.
Physical Appearance and Organic Tests. April 1932; Oct. 1932
Color Estimation, Turbidity, Tests and Moisture Determination. Nov. 1932
Polarization, Ash, Invert and H-ion Concentration. Feb. 1933
"Candy Test" and "Caramelization Test." May 1923
Beet Sugar: An Essential and Growing Industry. Jed Fiske. Oct. 1932; Dec. 1932; Jan 1933
Progress in the Technology of Chocolate, Sugar and Milk. R. Whymper. April 1933
Possibilities of Cane Sugar in Candy. E. Whitman Rice. Aug. 1934
Various Sugars—Their Effects in Different Confections. Feb. 1936
The Crystallizing Process. W. H. Haug. July 1936
Inversion—What Is It? Clarence P. Harris and C. P. Shillaber. April 1937; July 1937
Disintegration of Sugar in Chocolate Refining. A. A. Lund. Dec. 1937
Particle Size Measurement. C. P. Shillaber. July 1938; Aug. 1938
Liquid Sugar. Dr. J. F. Leete. Dec. 1938
Liquid Refined Sugars. Nedjati Fuad. April 1939
Invert Sugar Types. K. E. Langwill. March 1939
Sugar Types. K. E. Langwill. April 1939

Vitamins--
Brief history of their uncovering

by R. WHYMPER

First of two articles on Vitamins by Mr. Whymper. The next will discuss uses of Vitamins in processed foods.

BEFORE starting even the shortest history of Vitamins, related or unrelated to the Cocoa, Chocolate and Candy Industries, it is well to ask two apparently foolish, but really pertinent questions—(1) whether, on the one hand, cod-liver oil, citrus juices, yeast or the like, or any mixtures in which they might have been found, are any more effective in their curative properties since the uncovery and naming by scientists of the so-called Vitamins contained in them, and (2) whether, on the other, Cocoa, Chocolate and Candy in either their ancient or ordinary modern forms, are in any way reduced in pleasantness, nutritive and calorific values, or quality now that it has been shown to the satisfaction of the most fanatic food-faddists that Vitamins are scarce, or entirely lacking, in these normal delicacies? The answer is, of course, "No!" to both queries, yet a fact insufficiently recognized even today.

The fact that cod liver oil, citrus and other fruits and their juices, yeast, butter, milk and eggs (especially the yolks) have beneficent qualities, when taken internally, has been known and acknowledged for more than a century, deduced from the careful observations of many thousands of mothers, invalids and medical practitioners, while the *reasons* for their effectiveness in many cases of 'deficiency diseases' were found by a few researchers in the fields of medicine and dietetics. The *methods of synthesizing* the Vitamins, after their uncovery and identification as definite 'chemicals', remain the only real discoveries in this vast realm of 'accessory food factors,' and every credit must be given to chemists and to chemical-manufacturing houses and their research staffs, and particularly, Merck and Co., Inc., for making many of the Vitamins available to the consumer in reasonably cheap form. But it cannot be regarded as a sign of inordinate skill or inventiveness merely to restore back to polished rice, let us say, the water-soluble substance of the polishings, the absence of which in white rice had been previously, in 1911, announced in scientific journals to be causative in the 'deficiency disease' of Beri-beri; nor can one regard the addition of fat-soluble Vitamin D, in any form or by any process, to such a stable, fatty substance as Chocolate, for example, as a startling recent discovery or brilliant invention when, firstly, Chocolate has always contained some Vitamin D, and, secondly, (since Milk Chocolate was made long before the uncovery and naming of Vitamins) the presence of Butterfat and Milk-solids in Milk Chocolate has provided more than a little of other 'accessory food-factors', now known as Vitamins A, B, and G, for the benefit of the confection-loving public for a very great number of years, whether the consumer was aware of the fact or not. But, whatever the truth of this matter, my opinion is the same as it has always been—that Chocolate and Candy exist in their popular appeal to the purchaser *not* as *medicated confections* or even invaluable foodstuffs, but as *pleasurable delicacies*, and that they should continue to be so regarded.

Records relating to the curative effects of parts of many plants, fruits, fish and warm-blooded animals in specific diseases do, of course, date back to earliest history; and the modern druggist is merely an evolution of the herbalist and witch-doctor. The use of apple-juice as a cure for gout is definitely mentioned by one J. C. Colbach of London as early as 1699; and I rather suspect that it was the same man (then called 'John Colbatch') who, in the following year, published 'Novum Lumen Chirurgicum' in which Lemon and Orange Juices were mentioned specifically as cures for gout and scurvy, and which probably influenced the British Admiralty to issue Lime Juice as a ration for sailors in the Navy. The cure of scurvy by water-extractions of 'Scurvy Grass' is mentioned by Wm. Lewis in 1784; while Cod-liver Oil was shown to be highly effective in patients suffering from chronic rheumatism (1771) and gout (1824). And it was as far back as 1889 that M. C. Tanret isolated a new principle from ergot of rye, which he called 'ergosterol' and which today (1941), of different origin and when irradiated, is an important source of Vitamin D.

A search of the early literature shows that, from 1894 until 1911, the oriental disease of Beri-beri was receiving very special attention and that it was soon recognized as a 'deficiency' disease. At any rate, in 1903, Nocht in 'Sailing-ship Beri-beri' stated that a "food-factor" in beans and peas was destroyed by cooking the vegetables in soda; and, in 1909, H. Fraser and A. T. Stanton published in the 'Lancet' their findings that white rice was a causative factor in oriental Beri-beri.

It is worth mentioning here that in 1906 Sir Gowland Hopkins ('Analyst', XXI, 385-97, 1906) suggested

that the name 'accessory factors' should be universally adopted to apply to those "growth factors, the existence of which in many foodstuffs are present, however, in too minute amounts to be classed as foods or nutrients." In 1913 (though the first "Vitamine" had by that time been uncovered and named for two years), E. Abderhalden and A. E. Lampe were still asking "Do foodstuffs contain substances at present unknown which are important for the maintenance of life?"

Between 1650 and 1910 there are 326 references in my possession, a few among many possible thousands that I might have consulted, dealing directly with nutritional factors, influence of Calcium and Phosphorus in diet and disease, sterilization of foods, water, etc., by ultra-violet light (to which I shall refer later) but principally with Beri-beri. In the year 1911 alone I found there were 47 references mainly treating with Beri-beri and white, polished rice, and it was in that year that Casimir Funk extracted from rice-polishings a crystalline substance which was found to cure Beri-beri and to which he gave the name *'Vitamine'* since it contained the so-called 'amine' nitrogen—the first of the 'Vitamins' to be isolated. From 1911 on, the published references to Vitamins become so numerous in scientific literature that they can scarcely be listed.

The year 1913 was, however, very important in the field of accessory food-factors. Dr. E. V. McCollum and Dr. Davis found, that year, a hitherto unknown 'growth factor' dissolved in butter and in the fat of egg-yolk. This substance did not contain nitrogen and was called by the uncoverers "Undetermined dietary factor, fat-soluble A," since it was obviously *not* a *'Vitamine.'* The later uncovering of the factor 'C' in 1920, also containing no nitrogen, induced Dr. J. C. Drummond to suggest the use of the word *'Vitamin'* for these and future factors when found. Thus, McCollum's 'Unidentified dietary factor, fat-soluble A,' became 'Vitamin 'A' as the first of the series—but the second Vitamin to be uncovered—for a definite etymological reason. Thus too, were we launched on the flood of Vitamins that threatens to submerge all tenets of rational feeding and upon which floats the none-too-reliable life-belt of indiscriminate fortification of all and sundry food-stuffs.

In closing this brief historical sketch of the "Vitamins," I propose to jump to this present year of 1941 and to provide a table showing the most recent findings with regard to the natural Vitamin-content of several commonly occurring substances, many of which are used in the Chocolate and Candy Industries, and to follow in the next article with some description of the use made by the Industries of the knowledge acquired by the scientists in the field of 'fortification' of various foodstuffs with Vitamins.

Minimum Daily Need of Vitamins (Int. Units)—W. H. Eddy

Type of Individual:—	A	B_1	C	D	G (micrograms)
Infants	1,500	75	200	400	500
Child (1-6 yrs.)	3,000	125	400	400	?
Child (6-12 yrs.)	3,000	200	400	400	?
Over 12 years	4,000	250	500	400	2,000

Nutritional Values of a Few Important Foodstuffs

(Taken largely from "Nutritional Tables" published by H. J. Heinz and Company)

Foodstuff	A	B_1	C	D	G	Total Calories per 100 grams	Average Portion in Grams
Butter	3800	0-39	0	100	0	733	14
Dried Skim Milk	0	110	0	0	640	359	24
Chocolate (Sweetened)	0	10	0	fair	Insuff. data	511	57
Chocolate (Unsweetened)	0	10	0	100	Insuff. data	560	5
Cocoa	0	25	0	fair	Insuff. data	310	6
Sugar (Granulated)	0	0	0	0	0	398	25
Cod-liver Oil	85,000	0	0	8,500	0	900	11
Almonds	fair	100	0	0	good	629	14
Brazil Nuts	fair	340	0	0	good	686	14
Peanuts	26	220	0	0	200	590	14
English Walnuts	830	130	0	0	fair	694	14

Note: 'A', 'B_1', 'C' and 'D' are shown in above table as International Units per 100 grams: 'G' is shown as Sherman-Bourquin Units per 100 grams.

'A' is soluble in oils and fats, nearly insoluble in water, is not affected by heat, cooking or drying, but is inactivated by oxygen at the higher temperatures, especially in the presence of rancid fat, and is labile to light. The average adult needs at least 4,000 I.U. per day (Eddy).

'B_1' is soluble in water and alcohol, not in oils. It is decomposed in neutral or alkaline solutions, especially by heat, is stable in acid solutions and comparatively stable toward dry heat. Minimum adult requirement is 250 I.U. per day.

'C' is soluble in water and alcohol, insoluble in oils; very readily destroyed by oxidation, more stable in acid solutions. It is largely destroyed by cooking, especially with soda, but not by cooking in steam. Actual daily requirements are not fully determined, but seem to depend on content of ascorbic acid in the individual's blood.

'D' is soluble in oils and fats, insoluble in water; stable to heat, and fairly stable to oxidation. With adequate supplies of Calcium and Phosphorous, the daily need is about 400 I.U. for infants—from 300 to 400 I.U. per day throughout life.

'G' is soluble in water and oils to form fluorescent solutions, fairly stable to oxidation, acids and alkalis. Being widely distributed in natural foodstuffs, there is little danger of deficiency of 'G' in the ordinary diet.

Chocolate Progress--

Increased volume with improved quality

by BENJAMIN J. ZENLEA*

Improved raw materials, improved production methods and improved methods of standardization basis of progress.

It may be stated without fear of criticism that the greatest advance made in the past 20 years in the art of chocolate manufacture has been in the adoption of methods for standardized mass production. Such methods have resulted in large quantity production of stabilized and uniformly high quality chocolates at lower cost. The improvements in quality of the basic raw materials going into the production of chocolates were brought about by the application of scientific methods resulting from an intensive study made in this field by agricultural stations, plantation owners, chocolate manufacturers, chemists, engineers and mechanics. Because of these improvements chocolate is now produced in greatly increased quantities in a large variety of forms and flavors, which makes this product what may truly be called a highly valued and prized food confection of greatly concentrated food value.

Its relatively low cost places it within the means of people of every walk of life. Because of its delectable flavor it is eaten with great relish by the young and old alike. Its adaptability as a flavor makes it an ideal product for diversified uses in the baking, ice cream and confectionery industries. Chocolate is a preferred flavor as well as a food, and it is difficult to imagine a world without it. By incorporating vitamins in chocolate, a concentrated food is obtained which compares favorably with foods produced from grains which are considered the staff of life. Chocolate has been adopted by the War Department as an emergency ration. Chocolate, as a carrier for laxatives, has lightened the burden of many parents in regard to their offsprings.

In order to understand the improvements brought about in the manufacture of chocolate, we will discuss in their proper order, the effect of improved raw materials, improved methods of production, and improved methods of standardization.

The writer has heard old timers say that the chocolate of over 20 years ago was so much better than it is today, just like mother's soup or grandmother's pies. The old timer may be correct to some extent as far as chocolate is concerned, because a good proportion of the cocoa beans used then were of the Criollo type, very expensive and delicately flavored. Chocolate making then was considered an art with time a plenty to practice it, and by using lots of hand labor to correct any difficulties and errors which occurred.

Volume and Competition Change the Picture

Today the picture is quite different because of increased production, keen competition, and because of the necessity of practicing every economy to show a profit. Considering that it is necessary today to use almost exclusively the Forestero type of cocoa beans, and the high quality of chocolate which is produced with these beans, it is truly amazing that as a whole, the chocolate of today is as good and in many respects better than the chocolate of yesteryear.

What kind of chocolate would the old timers make if they had to produce the large quantity we manufacture today by the methods they used? Could mother and grandmother make a thousand plates of soup and pies a day as well as several a day by rule of thumb methods? The answer is no, as you probably have guessed by now.

It is stated that the Gold Coast of Africa exported 80 pounds of cocoa beans in 1891, and 133,909 metric tons in 1921. Today the exports amount to over 265,227 metric tons. To meet the increased demand for chocolate and its products, more and more of the hardier varieties of cocoa beans, Accra and Bahia, are used. In chocolate manufacture a large quantity of added cocoa butter is required for proper viscosity, and this cocoa butter is practically all pressed from the Accra and Bahia type of cocoa beans.

These cocoa beans because of their lower price and relatively higher fat content have proved to be ideal types for the production of cocoa butter, and with the marked improvements in the quality of these beans, they are generally now used for a great variety of chocolates and cocoas, both Natural and Dutched, or as some prefer to call them Domestic and Dutch Processed.

Quality Improvement Result of Wide Research

The improvement of the quality of cocoa beans began with a study of the growth, fermentation, drying, handling and transportation of this commodity.

**Research department, Rockwood and Company, Brooklyn, N. Y.*

In 1931 the Food and Drug Administration issued a notice which has kept out of the country cocoa beans which are defective. This notice stated that after April 1, 1932 the Department would detain shipments of cocoa beans containing in excess of 10% of beans showing distinct evidence of mold or worms or both. After October 1, 1933 wormy beans in excess of 10%, not over one-half of which shall be moldy, shall be detained.

At about this time the larger chocolate concerns in conjunction with Departments of Agriculture of several cocoa growing countries interested themselves in cocoa growth and fermentation, and some of them had representatives in the country of origin to select good quality cocoa for their use.

Much of our knowledge of the composition, nature of color ingredients, essential oils, the chemistry of fermentation, and the bean as a whole and its products and by-products has been gained from the unceasing efforts of the several scientists working in this field.

Several years ago the presence of excess lead was found in some chocolate and cocoa products. A study undertaken by several large concerns in conjunction with the Food and Drug Administration led to the discovery that lead seals were used on bags of cocoa imported from Africa. In spite of careful cleaning, some of the seals found their way into the finished product. Following this discovery, the lead seals were replaced by tin-plated seals, and through further improvements in machinery and in the technique of handling same, the lead content was brought down to such a low level as to no longer be a problem. We can also say that the cocoa beans have been improved to the extent that they no longer contain deleterious, extraneous materials.

Added Ingredients Important to Quality

During the past 20 years much attention has been paid to sugar which represents an average of about 40% of the total weight of chocolate produced. During this interval much attention has been paid to the crystal size of sugar, and to its effect on the ease of refining chocolates. This subject is still controversial as to whether so-called soft or hard sugars are easier to refine. Transformed sugar is a relatively new product, and in its several types may be slightly caramelized. It possesses a fine grain and is useful for the production of certain types of chocolates. Also during this interval, dextrose of extreme purity had become available for chocolate manufacture. This sugar is now used to some extent for certain types of chocolates.

The quality of milk used in milk chocolates has improved greatly in regard to flavor, solubility, and keeping qualities. The most marked improvement being in approaching and conserving flavor similar to fresh milk in milk powder products. Several types of milk powders of the cultured type and possessing strong milky flavors have appeared on the market in the past several years.

Cocoa butter may be thought of as a raw ingredient in chocolate manufacture, as relatively large quantities are necessary to obtain proper workability by control of viscosity. The quality of cocoa butter has been greatly improved by making use of some of the methods used in the purification of vegetable fats and oils. One of the main problems of the industry was the use of added cocoa butter to chocolate formulas which required large quantities of very high grade, delicately flavored cocoa beans. The unrefined cocoa butter imparted a strong-like flavor to this type of product and also to milk chocolates. Another source of trouble was the use of cocoa butter which was pressed from alkalized chocolate liquor, and which retained the alkalized flavor to some extent. Both of these types and similar types of cocoa butter can now be treated in such a manner as to result in a product which is almost bland and sweet. Thanks to advances made in this field, refined cocoa butter can be used extensively with the result that the final flavors of chocolates so produced are more uniform than they were prior to this improvement.

Good Flavor Without Increased Cost

In regard to flavors, vanillin may be mentioned as having been used only in higher priced chocolates because of its high price. Practically all the vanillin was produced from the raw material clove oil. Recent discoveries, however, that vanillin could be produced from other substances, especially from lignin containing substances such as wood, jute, straw, peat, etc., has made it possible for vanillin to be produced at a greatly reduced cost. Due to this advance it is now possible to use a quantity of vanillin which will lend distinct character to the coating, and yet only slightly increase the cost. Another flavor which made its appearance in commercial quantities was introduced for use in chocolate manufacture. This flavor is said to be three times as strong in flavor as vanillin, to which it is chemically closely related. Ethyl Vanillin added to chocolate is said to impart a flowery note which suggests chocolates of the vanilla bean type. Improvements in other flavors for chocolate use were introduced, especially flavors for use in milk chocolate, and also for caramel flavor types of chocolates. The use of these flavors has enhanced the palatability of the product to a delightful degree.

In the past twenty years methods of chocolate manufacture have improved greatly. One of the several outstanding achievements is the use of instruments for recording or determining temperature, fineness, viscosity and color. Twenty years ago it was not uncommon in walking through a chocolate factory to observe the vast amount of man power used for trucking around raw materials such as cocoa beans, sugar, milk, etc. All of these products were practically conveyed by hand trucks to bins by men, and quite often two men were required to cut, lift, and discharge a bag of cocoa beans or nibs to the proper hopper. Today an automatic conveyor conveys the bags of beans from the street to the storage space until they are used. Sugar is conveyed automatically to the pulverizing machine, and the pulverized sugar later to the machine where it is used.

In fact, during the processing, cocoa butter, liquor, sugar and chocolate are conveyed continuously from the raw material source to the finished product, and on to the packaging.

Twenty years ago one would see how a row of kettles containing approximately 2000 pounds of chocolate each. A thermometer was usually placed in the vicinity of the kettles to be used for tempering, but these thermometers were seldom used. The man in charge of tempering would walk from kettle to kettle and dip his finger into the chocolate and rub it across his lips. Another method was to feel the temperature of the chocolate with his elbow. The writer has heard some people say that the flavor of the chocolate changed when this practice was stopped. He would use his best judgment to decide when the chocolate was at the proper temperature or temper for molding.

It is surprising how well the product turned out in spite of this. In many cases the man had become a human

thermometer through a combination of skill and sixth sense, and was able to get by most of the time. A check up of the kettle which had been okayed for molding quite often showed that the man sometimes misjudged the temperature by as much as 3°F or over.

Tempering Methods Improve Quality

Of course the science of tempering has now been brought to a state of high perfection thanks to the contributions made by several workers in this field. Such studies in tempering have included the subject of fat content, viscosity, cooling, curves, crystallization of the cocoa butter, and fat bloom, and also the resistance to fat and sugar bloom on storage. The elements necessary for the stability of chocolate have also been studied intensively, and many factors regarding it have been ascertained.

In regard to proper tempering of chocolate experts agree to the necessity of a proper temper. but differ in the methods they advocate for obtaining its realization. Some prefer to supercool chocolate to several degrees below its proper tempering point and then raise the temperature to the proper point before molding, while others advocate the cooling down of chocolate slowly, allowing ample time for a reduction of the latent heat, to the proper temperature for molding. A careful study of factors involving proper temperatures and air circulation for cooling tunnels used for the solidification of chocolate has resulted in an increased output of greatly improved molded chocolates.

Instead of small kettles of several hundred pounds capacity, the modern factory now utilizes storage tanks of ten, twenty or thirty thousand pounds and even greater capacity. The flow of chocolate goods must go on and on, and its uniformity ascertained and adjusted to a standard determined beforehand. This is accomplished not by guess methods of twenty years ago, but by methods utilizing recording instruments.

Time and time again there has appeared on the market products which, it was claimed, if incorporated in chocolate would retard fat bloom. One by one these substances have fallen by the wayside, only to be forgotten in the passage of time. The claims made for these substances, however, were not entirely without beneficial effects, for they served to stimulate the study of factors involved in fat bloom and the stability of chocolate.

Later it was discovered that the viscosity factor was more important for uniform fluidity than fat content. It was also discovered that the same type of chocolate could have the same viscosity with fat contents varying at times by as much as four pounds of cocoa butter per 100 pounds of chocolate. This startling fact led to an exciting study of the factors involved, and they were found to be due to slight variations in composition, fineness of milling, moisture content, temperatures used in manufacture, amount of manipulation the chocolate received, etc.

Lecithin Now An Accepted Ingredient

Twenty years ago lecithin chocolate was practically unknown, but today lecithin is an accepted ingredient. Small quantities of lecithin in the amount of several hundredths to about four-tenths of one per cent reduces the viscosity of chocolate to a marked degree. Three tenths of a percent of commercial lecithin is usually sufficient to drop the viscosity of a chocolate to its practical stabilized point, resulting in coatings which contain up to approximately four percent less cocoa butter for the same viscosity. Much has been written about lecithin, but we can state that coatings made with lecithin resist thickening up due to moisture, allows greater flexibility in temperatures used for enrobing, and allows more uniform coverage of centers. Coatings stabilized by lecithin change only slightly is viscosity on aging, heating, or mechanical manipulation.

Other substances have appeared on the market under various trade names which, when added to chocolate, caused a reduction in viscosity. These substances are mainly produced by synthesis and are known as synthetic emulsifiers.

Even twenty years ago it was customary for the larger chocolate manufacturers to have at least one chemist in their employ. Among the several reasons for this state of affairs was the fact that a chemist gave prestige to the company. It was considered a good investment to have a scientific man around who could be called "Doc," and who could presumptuously answer all questions and cure all evils.

Although many blunders were made in trying to adopt scientific methods to chocolate manufacture, great advancements were made by these scientists. One of the greatest obstacles they had to overcome was the oldtimer chocolate expert who insisted that he had been making chocolate for the past twenty-five years, etc., etc. It may sound foolish but quite often, the oldtimer was right, and a good deal of truth was found in his statements.

Viscosity Control Leads to Study of Fineness

The study of viscosity control lead to a study of fineness determination of chocolate liquor, cocoa, and chocolate proper. Fineness was at first determined by taste, and later on by microscopial observation, or by projection of the enlarged image on a screen. These methods were found to be both time consuming and not readily applicable. In the present method used by several laboratories, measurement is made by means of a micrometer caliper which reads accurately to ten thousandths of an inch, and also by wet sieving methods. By means of these methods and by taste tests it is possible to standardize the fineness of milling throughout each phase of its manufacture, so that the finished product will be within the tolerance set for it for fineness.

Uniformity of flavor is determined by a board of tasters consisting of people of both sexes from several parts of the factory including the laboratory and office.

Color standardization has been made more exact by studies of methods of roasting and Dutch-processing which have been brought to a high-degree of perfection.

The use of excessive amounts of cocoa butter has been cut down by improved methods of agitation, and by the use of viscosity reducing substances.

Roasting is still practiced to some extent by utilizing small batch roasters of a capacity of about 600 pounds. These roasts are made in rotating heated drums which may be heated by coal, gas, or oil. The proper degree of roast is left to some extent to the judgement of the operator. More recently continuous roasters have appeared on the market which are capable of roasting large quantities of cocoa beans, and thereby maintaining a more uniform quality. A good deal of the ultimate flavor of chocolate depends on the proper degree of roast which needs to be varied to obtain the results desired.

For the production of finely milled chocolates of velvety smoothness, refiners have been improved to the extent where they will take the chocolate from a fineness

(Turn to page 60, please)

Flavors--
Twenty Years of Progress

by CLAUDE JOHNSTONE*

Quality and composition of flavors have changed considerably, and confectioners are reaping the benefits from improved flavor quality.

Claude Johnstone

For more than 35 years it has been my lot to be associated with flavors in every form and for every purpose. The manufacture and application of flavors is not an exact science, although the consumer preference for flavor can be confined within fairly definite and well known limits.

Look around and you will see certain types of flavors which seem to take the lead over all others. There are certain fundamental or primary reasons for this preference on the part of the consumer of candy, beverages, and the thousands of other food products, which go much further than that of advertising alone. It is not within the scope of this topic to go into the various psysiological and psychological reasons for this certain consumer preference but rather to mention a few of the results of this phenomenon.

A great number of us can remember when lemon was the most popular flavor used in candy, and for a young man calling on his best beloved, a ten cent bag of lemon drops, the height of elegance. But no longer is this true,—nothing less than a two pound box of the Best—containing a minimum of 60 ingredients, which, alas, must all be stated on the label, so that they may have something to read and become acquainted with *our* innermost and one time sacred secrets.

No longer are we satised with the flavor of lemon; we demand orange and lime, vanilla and cinnamon, cherry and grape, pineapple and strawberry and all the rest, until no flavor manufacturer's list is complete unless it contains at least a hundred varieties of flavor—and we are seeking new ones every day—hoping to capture that most elusive of all things, "The Perfect Flavor."

During the past 20 years there has been a great change in the quality and composition of flavors in general.

It is true that lemon, orange, lime and the spice flavors have remained the same, although their refinement and application have changed somewhat during that time. I refer to the great advancement in organic chemistry, which gives the flavor chemist several hundred new compounds with which to duplicate those elusive flavors heretofore found only in nature's laboratory.

The composition of the various fruits is fairly well known and it is now possible to duplicate the flavors found in these fruits to a remarkable degree, oftentimes the natural flavor found only in best fruits can be improved upon and at a very modest cost, thanks to the ingenuity of the organic chemist.

This whole matter is often misunderstood. Practically all of the compounds found in the well constructed fruit flavors, are present in the respective fruit, although these compounds have been derived from some source other than the fruit in question.

We have been able to build flavors to resemble the various fruits, with these more plentiful compounds, until they are within the means of every candy manufacturer; and the very fact that these flavors are produced cheaply, often results in their abuse. Witness the abuse of vanillin. As a low cost substitute for the vanilla bean, most manufacturers use too much of it in a given quantity of material, thus defeating the thing which they wish to accomplish, reproducing the flavor of the vanilla bean. This condition is very prevalent in the ice cream industry.

The conditions governing the flavor industry today are quite different to what they were 20 years ago. Before and during the last war, we were dependent on Europe for the greater portion of our aromatic chemicals and flavor raw materials and colors. Today we are practically independent of them and in most instances far ahead of them in the quality and production of these essentials.

For instance, we are supplying England with peppermint oil today—20 years ago, most of you will remember quite well what you used for this important flavor.

Today, we are no longer dependent on Italy for citrus oils; we produce our own, more uniform and at a lower cost. No longer do we use textile colors for our candies; we make the best and purest in the world.

No longer need the buyer beware the seller, but with the utmost confidence he may intrust his needs and problems without the fear of his interest being betrayed.

Progress in the industry through the more intelligent use of the many new products offered from time to time in the trade journals should produce profitable re-

* *Flavor Department, Dodge and Olcott Company, New York, N. Y.*

(*Turn to page 68, please*)

Machinery--
Instruments of cost reduction

by MARIO GIANINI*

Development has been in terms of improvement, but new machines also are contributing to volume at reduced costs.

You have asked me to express my view on the developments of the mechanical equipment of our industry during the last 10 years. You have taken as an excuse for this request the fact that I had committed a similar act 10 years ago on the occasion of the 10th Birthday of THE MANUFACTURING CONFECTIONER. Ten more years of growth in our industry, you said, surely must have brought some developments in its mechanical status. All very true; but, to use a little slang, why pick on me?

I have only one answer to my own question: I must be a glutton for punishment! I only hope, though (and that shall be a great compensation in itself), that my clumsy effort, sure to fall short of its all-embracing goal, will arouse the real moguls of our large and mechanized factories into coming forth on the pages of THE MANUFACTURING CONFECTIONER and for the good of one and all, showing up my limited knowledge of things mechanically available and now being done by mechanical means in the industry's plants.

Too few of us, and I confess that I am not one of them, care to, or can, find the time to express our views, discuss our problems, air our troubles at a round table that a periodical such as the "M.C." makes available and which it places at our disposal. Too often we simply depend on the representative or salesman to call on us and to tell us of the marvelous claims of this device or that machine. The principal reason is naturally to be found in the more exacting, tremendously intensified job of the average candy plant superintendent nowadays. As a primary cause I would mention the changes in hours and attitude of Labor which, with Materials and Equipment, form the triangular foundations of our daily production and which are bound to cause us superintendents to lean more and more to the mechanical side and to look for, help to develop, and make available a more mechanized industry.

Not that I begrudge for a single instant Labor's gains and betterments; the fact remains, however, that candy is a commodity which is quickly disposed of when its price is within the reach of the general public, and quickly done without when it is not. It behooves us, then, to be incessantly on the watch to keep within the bounds of its consumption price and to overcome the ever-increasing costs of manufacture, by further conceiving, developing, fostering and accepting mechanical means of production.

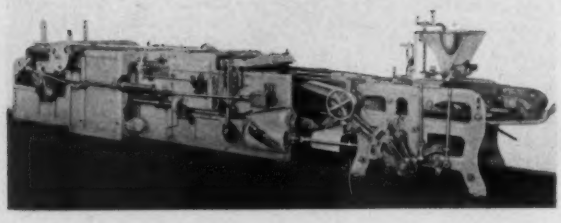
There is at this point, however, another thought which I am sure has been, and is, being entertained in the minds of the production men of the industry and which I believe should be taken hold of by production men in the more mechanized plants. That thought is the necessity that the mechanized side of our factories should take a new trend, a trend in which the "sanitation angle" of our production should be kept in the forefront. The Federal Government, having accepted our definition that "Candy is a Food" has stepped in to tell us that we as a food industry are far from being on a sanitary par with the Dairy industry, the Ice Cream industry, or the Bakery industry.

Of course, dirty floors, dirty trays and pots and pans have nothing to do with machines. We agree that as against the comparative simplicity of production of the above-mentioned industries, we have to fight with ever-present sugar dusts, starch dusts, cocoa dusts, etc., collecting everywhere every day and every day melted by water and baked and hardened by steam. Of course, we agree that the keeping of a spotlessly clean and sanitary factory in the face of such almost insurmountable problems is a job for the factory hands, directed and commanded by an open-minded, far-seeing and collaborating management.

The condition described is, however, the principal reason why the builders of machines and equipment must keep the sanitary angle in mind so that their products will meet with the modern conception—the new trend—

Vacuum's cooking and cooling unit for production of cream fondant on a production basis.

* *Superintendent, Wallace & Co., Brooklyn, N. Y.*



National Equipment Company's harmonic mogul.

of sanitation laws; and so that they will simplify the job of keeping the machines clean and help place the industry on the same footing, from a sanitary standpoint, with the other mentioned industries. When a federal inspector, visiting a grantedly clean candy factory, takes the point of his penknife and scrapes the slot of a flush, flat-headed screw and tells you that the speck of sugar or chocolate he has scraped from that slot may contain bacteria . . . . . it's high time to go streamlined! Perhaps, even, we should eliminate screws and bolts, and weld all our machinery.

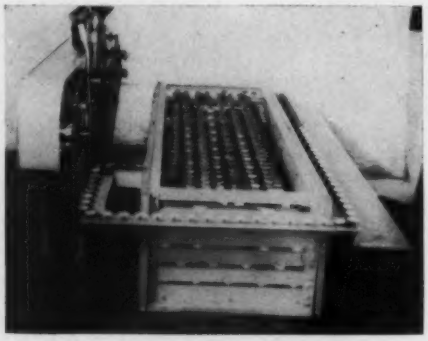
Forget for a moment all except a clear, very clear, picture of the aim of the federal inspector. Leave your desk and go out into the plant. Take a minutely critical look at the average factory's chocolate coating machines, starch depositors, coconut and nougat mixers, etc., etc., and you will quickly see that the machine industry can go a long way to help us in attaining this aim, lofty and difficult as it may seem.

Do I hear someone say, "It's being done"; that the trend is already underway? Quite possibly it is; in fact, in a small way I know even myself that it is, and this brings us to the kernel of this writing, to the head of these meanderings.

To say that many "new" machines or devices have appeared on the industry's scene would be an exaggeration. Rather, it would seem that more progress has been made in improving the available mechanical equipment used for confectionery production. This does not exclude the fact that many new machines have been created, developed and perfected; but the trend seems to be toward items of specialized production rather than machines for performing basic functions and generally useful to all candy producers.

Outstanding in the former bracket and reflecting one man's opinion, we see the improved arrangements for quick handling, cooking and cooling of sugar creams or fondants developed by Vacuum Candy Machinery Company, Savage Brothers and Hohberger. This development is a real contribution to candy plant equipment of large and small factories. When we visualize one of these cooking, cooling and beating jobs placed ahead of the continuous hand roll cream center machines developed by Friend, Production Engineering Company and Bainbridge, we come pretty near having what any inspector would call the "ideal" from the sanitation point of view—what a production man would be glad to have, and the "boss" glad to exploit. To say that these machines in various capacities brought out in the past 10 years have gone a long way toward re-establishing in the public's mind this long line of delectable confections—the chocolate-covered creams—is to minimize their real worth and their contributing share in the development of better candy at lower manufacturing costs under the new trend of sanitary conditions.

But there are others. The problem of dust is being taken care of very nicely in some plants using the Sly or Pangburn dust collecting systems. In the field of candy cooling or warming, the new Savage heating-cooling slab is a long step forward in a piece of equipment designed to serve more than a single purpose and fitting in very neatly with today's conception of streamlining



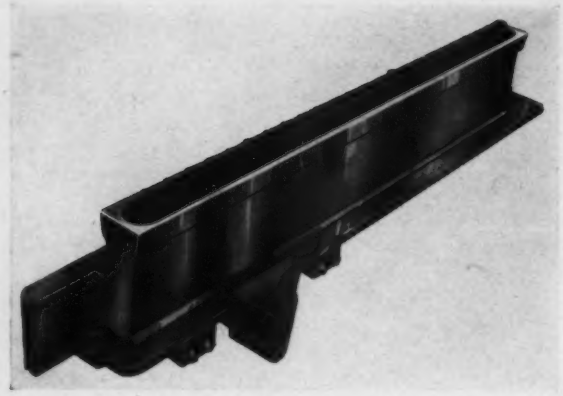
Greer peanut cluster machine.

in the plant. This slab will heat or cool as desired, will take any type of refrigerant, withstands high pressures, and can be used even as a bottoming table.

When we come to the "major" items of confectionery equipment, we are inclined to look first at the chocolate coating machines as having made very substantial progress in the last 10 years from the point of view of improved efficiency and in part, at least, in all-around better appearance. The Greer coater certainly is a handsome piece of machinery as compared with some of its predecessors, and the whole set-up, with its refrigerated cold slab for bottoming attachments and the multi-tier chocolate cooling machine, is a marvel of clever engineering.

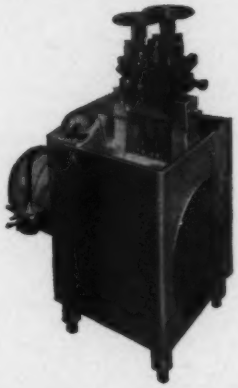
Admittedly one of the greatest contributions to chocolate cooling equipment is the Economy Equipment Company's "belturn," which enables the use of floor space in different directions for cooling chocolates on delivery belts in the cooling tunnel, after machine-coating. Their tunnel for cooling, also, incorporates engineering ingenuity combined with a broad, but specific knowledge of the proper handling of chocolate goods after coating. In the same category fall this same firm's pre-cooling conveyors for temperature control of centers prior to coating, and the dry air units for tunnels. And while we're on chocolate equipment, the recently announced Latini mechanical decorator is making a host of friends for itself.

Economy Equipment Company's cooling tunnel for chocolate work.



Hydro-seal mogul pump bar, a development of recent origin and bound to affect all future production of starch work.

In the field of starch equipment we find a great deal of improvement in the last 10 years. Goodness knows, starch is a devilish thing to keep clean and in proper condition for the many moulding purposes to which it is put in our industry. The Huhn "chinook" is perhaps best known, but the most recent developments in this type of machinery are represented in the Bullerjahn and Wolff-Sheffman conditioners. The mechanical means of



Homogenizers are finding an ever-increasing field of usefulness in the confectionery industry.

cleaning starch have been greatly improved in the Bullerjahn centrifugal cleaner and the Great Western cleaner. The principal of accelerating-decelerating synchronization in the entire mogul set-up, from starch tray feeder, through the mogul, to the mechanical stacker has been accomplished successfully and will shortly be made generally available. Improvements in the starch trays proper are available in Currie's steel, self-centering trays, and the Currie tray stacker is sheer engineering ingenuity.

Also, in the field of starch work, one must mention National's new hydry-seal mogul pump bar. This all-important "heart" of every mogul and depositor seems at last to have been brought to such a point of perfection and efficiency that it will surely bring tears of joy to every mogul operator, and a sigh of relief to the maintenance staff. Patented only at the beginning of this year, it offers: A pump without washers—no tailings—constant and exact weight of deposits—all sizes of casting, single, double, triple and quadruple rows as needed and. . . . . a life eternal. What more could you ask?

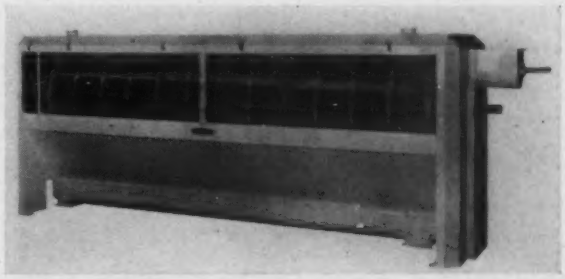
In the category of new developments one cannot but take notice of the ever-increasing field being found and served by the homogenizer. Looked upon with disfavor only a decade ago, this piece of equipment is today proving itself more and more useful, even necessary, and seems to open up numberless jobs for which it can prove valuable, practical and beneficial. Marco's "flow-master" is proving its worth in many ways, as for instance, the elimination of storage and refrigeration of condensed milk, since it will produce its own skimmed or whole condensed milk at a moment's notice, from dry or solid materials. With it you can homogenize your caramel or fudge mix and deliver it to your kettles direct, and the result is goods that is non-fat-bleeding. Syrups and fountain sauces are claimed to be improved by it; likewise, peanut butter that will not separate. Also, foods in which the processor is adding vitamins. (Vitamins! The talk of the Nation!) Definite claims are made for it in the production of chocolate coatings, liquors, and the hard-to handle summer coatings. Surely it is built along the new "trend" of sanitary, streamlined equipment.

Speaking of syrups and sanitation, do you know that in at least one candy plant all syrups and batches are filtered, not once, but several times, before they reach the stage of finished candy? Cuno filters are being used for this purpose, and what they take out of batches occasionally, even where more than average care is exercised, would surprise the average candy man. In this same plant, magnets are being used on conveyor belts carrying candy-in-process to pick out any stray filings or metal scrapings that may get into the goods in spite of all precautions. Bar manufacturers have gone even a step further by introducing fluroscopic machines at the end of their production lines to put the finished goods through one more final inspection for foreign materials, before storage and shipment. General Electric Company and Adrian of Milwaukee have contributed notably to this type of equipment.

In the way of outright new machines, rumblings are heard of a new continuous candy depositing machine invented by E. Rapisarda and now being built by the Wolff Company. Here's a depositor that is designed to fill one complete tray at each stroke, stack and re-stack its own trays, and what not—in other words, everything except cooking and packing the goods.

New also is the continuous peanut roaster which will shortly reach the market from the house of Jabez Burns. A continuous cocoa bean roaster has already made its appearance, also from Burns. New as well can be called the Greer continuous peanut cluster machine, the Lehmann large production cooling and tempering device for chocolate, the Sisco nut roll machine of Savage's, and a plethora of auxiliary machines, devices and gadgets that have appeared on the scene in the last 10 years, but which would make too long a list to enumerate separately.

(*Turn to page 50, please*)



Bullerjahn all-steel centrifugal starch cleaning reel, with doors removed to show interior.

Corn And Confectionery- -

by EVERETT H. CLARK*

Corn syrup grew up with the confectionery industry, but how much do you know about its beginnings, the men who developed it, and the newer products of the industry that makes it?

Corn syrup is a thoroughbred American product, made by domestic producers out of the greatest of our domestic crops, yet it originated from a foreign war through a chemist who sought a reward from France and reported his experiments to the Imperial Academy of Science of the Czar of Russia at St. Petersburg.

The chemist was Gottlob Kirchoff. The time was about 1810, when the British succeeded in blockading Europe so thoroughly that little sugar was available and Napoleon offered a reward of 100,000 francs to any scientist who could produce a sugar from products available on the continent. Kirchoff experimented and produced both a sugar and a syrup from starch. Whether or not he collected his reward is a matter that seems to be neglected by the historians. He made his report to the Russian Academy in 1811, two years before Napoleon's first exile.

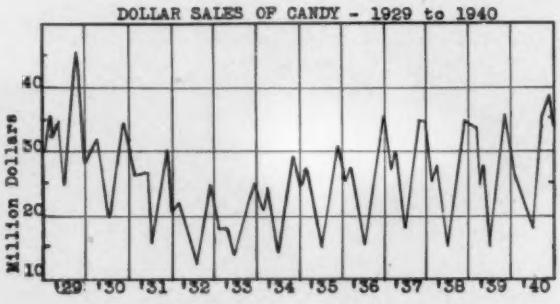
The sugar and syrup made by Kirchoff were not made from corn and little was done with his discovery until after our own Civil War, when a few scattered experiments encouraged Cicero J. Hamlin to establish the first important and permanent factory for corn syrup manufacture. Hamlin opened his plant in Buffalo, N. Y. in 1873. Possibly there is not much resemblance between the product of that day and the present skillfully-made syrup, but Hamlin's example was quickly followed by others and there seemed to be a ready acceptance of the new commodity by food processors.

We know now that corn syrup filled a waiting need. The confectionery industry was old in the historical sense, but small in the volume of its output. Varieties were few and methods were largely mere modifications of kitchen cookery. America was just entering its great era of industrial expansion.

According to some of the old-timers, the best of the confectionery craftsmen knew very little either about crystallization, differences in water, or what happened during cooking. The art of controlling grain and of preventing bleeding was accomplished by "water killing"; boiling down, adding cold water and boiling again. Technicians today will tell you that this produced inversion by the development of saccharic acid and its action toward breaking down the sucrose.

The major trouble with the method was that the amount of inversion was uncertain. The introduction of tartaric and citric in measured amounts for the control of inversion was a step in the right direction, and the entrance of corn syrup on the scene finally gave the confectioner the full control he needed to build his art into a major industry. For the first time he could measure his ingredients with some assurance that he was not going to lose the batch.

**Corn Industries Research Foundation, New York.*



In the meantime, corn syrup itself was not an easy product to manufacture and much of the technical progress that built it into a reliable, high quality ingredient is credited to Dr. Arno Behr, whose scientific ability seems to have been stronger than his personality, since his name recurs again and again on the technical side without revealing much detail about the man himself.

Corn Syrup Well Established by 1884

By 1884 the product was well established in American life. Its use grew, along with the rapid expansion of industry until the disastrous depression of the 1890's when all business slumped and the record of failures and reorganizations in every line of business was shared alike by confectioners and their suppliers of materials. With the upturn of activity the names of present-day manufacturers began to appear and there has since been little change except in the steady increase in volume and quality of the product.

Aside from the technicians now working on the production of corn syrup, the best known of recent prominent names in the industry is that of Dr. A. P. Bryant, remembered and admired by most of the readers of the earlier editions of THE MANUFACTURING CONFECTIONER. His contributions both to his own industry and to confectioners were outstanding and went far toward revealing the actual chemical composition of confectionery ingredients and the intricate changes that take place during manufacture.

Another name that is well worth remembering is that of an outsider—a man who knew little and cared less about any industry but nevertheless did wonders in familiarizing the public with an ingredient that was not too well known. In fact a great many confectioners a few years ago were hesitant about telling the public that they used corn syrup at all, the feeling being that the less the public knew the better off it would be.

(Turn to page 53, please)

Taxation--
Striking Parallel With 1921

by WALTER C. HUGHES

Mr. Hughes became the N.C.A.'s first executive secretary just 25 years ago. He finds the tax problem little changed today.

"The Crisis in the Confectionery Industry" is the title of an article which I wrote for the initial number, May, 1921, of this magazine, then beginning its career of distinguished service to the industry.

The following paragraphs, quoted from that article written two decades ago, show a striking parallel with the conditions and problems confronting the candy industry today.

> "Uncle Sam's daily expenses are about ten million dollars—think of that if you can—ten million dollars per day for expenses! An almost unbelievable amount, and certainly not a thinkable amount to the average taxpayer."

(Today, we may note in passing, expenses . . . and corresponding need for revenue . . . are about five times as great—and about as "unthinkable.")

> "We used to think that we were extravagant when we talked of governmental expenditures in terms of millions. Now we speak with the greatest indifference of governmental expenditures in terms of billions."
>
> * * * *
>
> "Conspicuous amongst the inequalities of the War Revenue Act are the Excise Taxes imposed on a group of twenty (20) or more industries including the confectionery industry. Why these industries were singled out from hundreds of industries to bear a special burden of taxation would be hard to say. The assumption that a tax should be placed on the production of merchandise of a certain class or kind is wrong in principle and not justifiable from an economic or any other standpoint.

First Excise Tax on Candy

An Excise Tax on candy was first proposed by the House Ways and Means Committee in considering the War Revenue Act of 1917. It was to be on a poundage basis. As a result of the industry's presenting convincing arguments against the tax, on that or any other basis, the Senate Finance Committee eliminated it, although such taxes were imposed on a number of other industries.

A year later, President Harding requested that the Ways and Means Committee bring in a bill raising at least $8,000,000,000 for war purposes.

Then we were beginning to talk in *billions* . . . now we talk in *tens of billions*.

Confronted with the necessity for raising such tremendous revenue, the Committee began investigating all possible sources of taxation. Again a tax on candy was recommended. Then, as now, it was thought of as a luxury tax, *a tax on something people COULD get along without.*

The N. C. A. Executive Committee decided that it was not only necessary, but the patriotic duty of the industry,

WALTER C. HUGHES

to make some recommendation regarding the kind and amount of tax. A 3% tax on manufacturers' sales was recommended.

This proposal was rejected by the Ways and Means Committee on the grounds that it would little more than meet collection expenses and a 5% Excise Tax on candy was included in the Revenue Act of 1918, effective Feb. 25, 1919.

Obviously it would be unfair to tax candy and not other food products sold in direct competition. Seeking *equitable* taxation consumed more time than any other problem presented by the imposition of the tax. The Treasury Department's ruling finally included many competitive products, but left out some that candy manufacturers felt should have been included.

Within the industry, a problem of major importance was the price and quantity adjustments made necessary by imposition of the tax. This was especially the case with penny goods and bars, customarily sold at fixed weights and prices by the retail trade. And this problem vexed the industry for 15 years, the entire period of payment of the excise tax.

Who Paid the Tax?

The question naturally arose of whether the tax should be "absorbed," or "passed on" to customers in increased prices. With this in mind, the Treasury Department ruled, in 1918, that manufacturers could invoice candy to their customers at a flat price, which included the tax, *provided* a notice was stamped or printed on their invoices, in the case of the 5% tax, to the effect that 20/21sts of the total amount of the invoice represented the

(*Turn to page 48, please*)

Important raw materials . . .

Pectin in Candy
Development of Recent Origin

About one hundred years ago pectin was unknown but universally used unknowingly in the manufacture of jams, jellies and preserves and to some possible extent in the manufacture of candy. The first announcement dealing with the discovery of pectin was made in 1824 by the French chemist, Braconnot. This was given at a meeting of the Royal Academic Society at Nancy, France. However, as previously stated, pectin had actually been in use, though unknowingly, for many centuries. Housewives and cooks, in preparing what were customarily called jellies and jams, were employing fruits which were rich in pectin, because experience had shown that by so doing and combining them with sugar and cooking to a heavy consistency, a jelled consistency was obtained. It was also observed that jellies and jams could not satisfactorily be made with all fruits. The reason was, of course, not known. Those skilled in the art learned by experience that by blending fruits or fruit juices with those which were rich in the jellifying substance, it was possible to make combination jellies and combination jams of a satisfactory consistency. Braconnot, in his paper, revealed the explanation for this heretofore unknown phenomenon, and attributed it justly to the presence or absence of pectin.

Pectin is now manufactured, principally from apples and citrus fruits. Those who are engaged in the business of manufacturing pectin are usually located in an area where either one of these raw material sources are produced in large quantities. We therefore have pectin manufacturers, using apple as a raw material source, located in the East where apples are grown heavily, and other manufacturers located in California, where the citrus industry is a major part of the agricultural productivity. In both apples and citrus fruits the major portion of the pectin content is found in the peel of the fruit, and it is believed that pectin plays an important part in cementing the cell structure of the outer skin of these fruits. Pectin is extracted from the peel of fruits and, by filtration, purification and precipitation, is brought to a highly standardized uniform product by the manufacturer, and offered to the confectionery industry in the form of a powder material, which is quite stable and not subject to deterioration.

In giving a definition of pectin, we usually have recourse to its utility rather than to a technical description of its composition. Therefore pectin was usually in the past, at least, referred to as a non-protein hydrophyllic colloid, which in the presence of sufficient acid and sugar will produce a jelly. As a measure of its utility in industry it is customarily sold on the basis of grade, and the 100 grade figure is customarily used, in that it represents a pectin of such strength that one pound of it will jellify to a jelly of standard consistency 100 pounds of sugar in the presence of at least 65% soluble solids (sugar solids) and sufficient acid. This standard for pectin, of course, relates primarily to the manufacture of jams and jellies, and in its application to confectionery uses, because they have no supporting medium such as the sides of a glass tumbler, it is necessary to employ approximately twice this amount to obtain a jelly of adequate firmness, so that it may stand by itself. In a recent bulletin of the National Formulary Committee, in defining pectin for certain medicinal uses, a more technical definition is given as follows: "The pectin molecule is thought to be composed of chains of partially methoxylated galacturonic anhydride units."

In the confectionery industry pectin seems to have been coming into prominence within the last 20 year period, and it is therefore a relatively new material to a very old industry. Investigators within the industry itself, on learning of pectin, saw possibilities of its use in the production of confections, and carried on experimental work many years ago. This was followed by experimental work by various scientific investigators and by the manufacturers of pectin themselves. In a publication dealing with the manufacture of pectin, published in 1928, there is a full chapter on the manufacture of confections in which pectin is the jellifying substance.

An accurate figure on the amount of pectin used by the confectionery industry is impossible to secure; however, a conservative and intelligent estimate would indicate that 100 grade pectin is being used at the rate of 150,000 pounds per year by the confectionery industry. Assuming that one pound of pectin will produce at least 50 pounds of finished goods, we arrive at the rather astounding figure of 7½ million pounds of pectin goods that are probably produced per year, which is indeed a remarkable gain for an item practically unknown 20 years ago.

BIBLIOGRAPHY

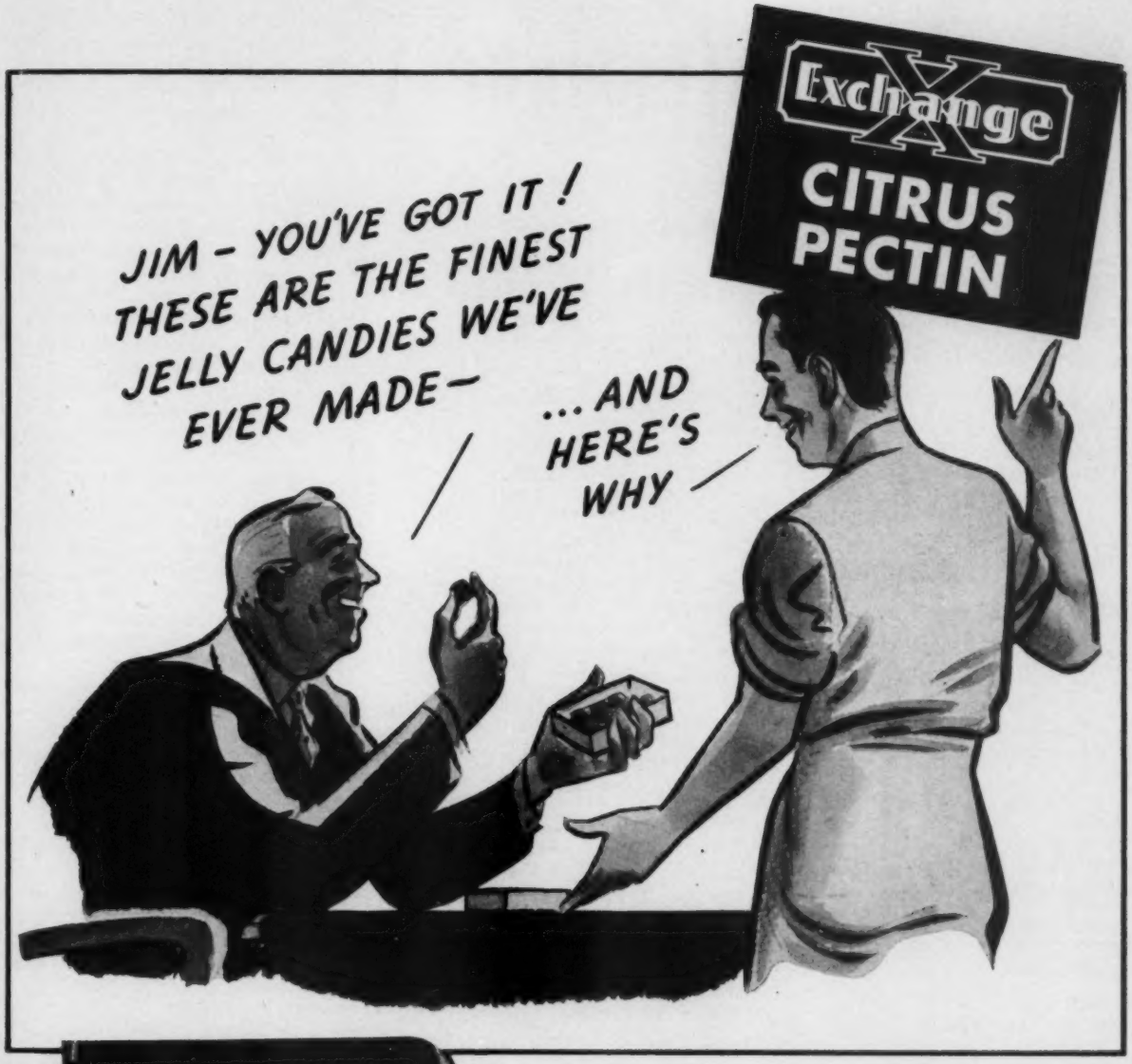
Confectioner's Handbook
California Fruit Growers Exchange
Fruit Pectin by William Rooker
Avi Pub. Co., Inc. 1928
Bulletin of the National Formulary Committee. Volume 9, No. 1, October, 1940

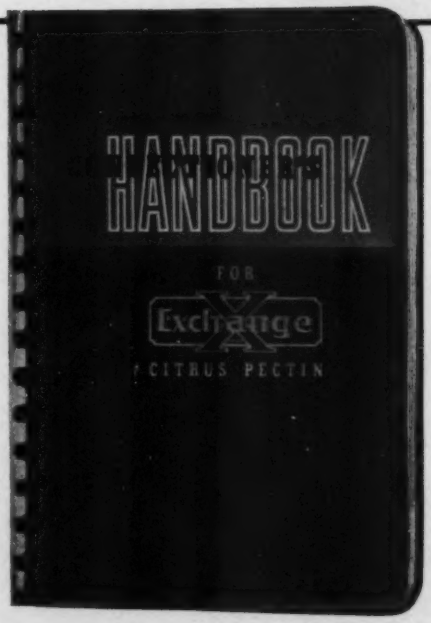
Less Molasses Available For Candy

by JAMES A. KING
American Molasses Co., New York

The chief difference between molasses produced 20 years ago and that produced today consists principally in the relatively small amount of quality molasses produced at present. In other words, 20 to 25 years ago much larger amounts of really high grade molasses were used. This is most likely due to the advance in sugar refining methods, as the sugar refiner is principally interested in securing the maximum amount of granulated or refined sugar from a given weight of raw sugar. The modern refiner is not interested in producing high grade molasses and, as a result,

(*Turn to page 63, please*)





You can recognize the quality difference every time in jelly candies made with Exchange Citrus Pectin—*and so can your customers.* It makes a world of difference in brilliant appearance, smoothness of texture and fine flavor – whether made cast or slab. That's why Exchange Citrus Pectin is preferred and everywhere recognized as the "Standard." And you are sure of a constant supply, because California oranges and lemons are harvested every week in the year.

Send today for your free copy of the Confectioner's Handbook, giving all latest Exchange Citrus Pectin formulas. Write now to Division 205.

CALIFORNIA FRUIT GROWERS EXCHANGE
PRODUCTS DEPT., ONTARIO, CALIFORNIA
Branch Offices
189 W. Madison St., Chicago **99 Hudson St., New York**

Copyright, 1940, California Fruit Growers Exchange, Products Department

Nuts in confectionery

Candy Industry Uses Peanuts in Many Products

by HAROLD J. CLAY*

USE of peanuts in the manufacture of candy is nothing new. The early records tell of many candy manufacturers who tried out different candy products in which peanuts were an important ingredient. For example, "The Peanut Plant", written by B. W. Jones and published in 1885, tells how "flat bars of sugar candy were stuck full of the broken kernels of the roasted nuts", and during the entire 20 years which this issue of THE MANUFACTURING CONFECTIONER is celebrating, candy manufacturers have been an important outlet for shellers of peanuts. At present the manufacture of candy does not take as large a proportion of the peanut crop as was the case 15 to 20 years ago. But peanut candies of various kinds still furnish an outlet for shelled peanuts only less important than that supplied by peanut butter manufacturers and salters, and the manufacture of candy may even exceed the latter use in the quantity of peanuts which it utilizes.

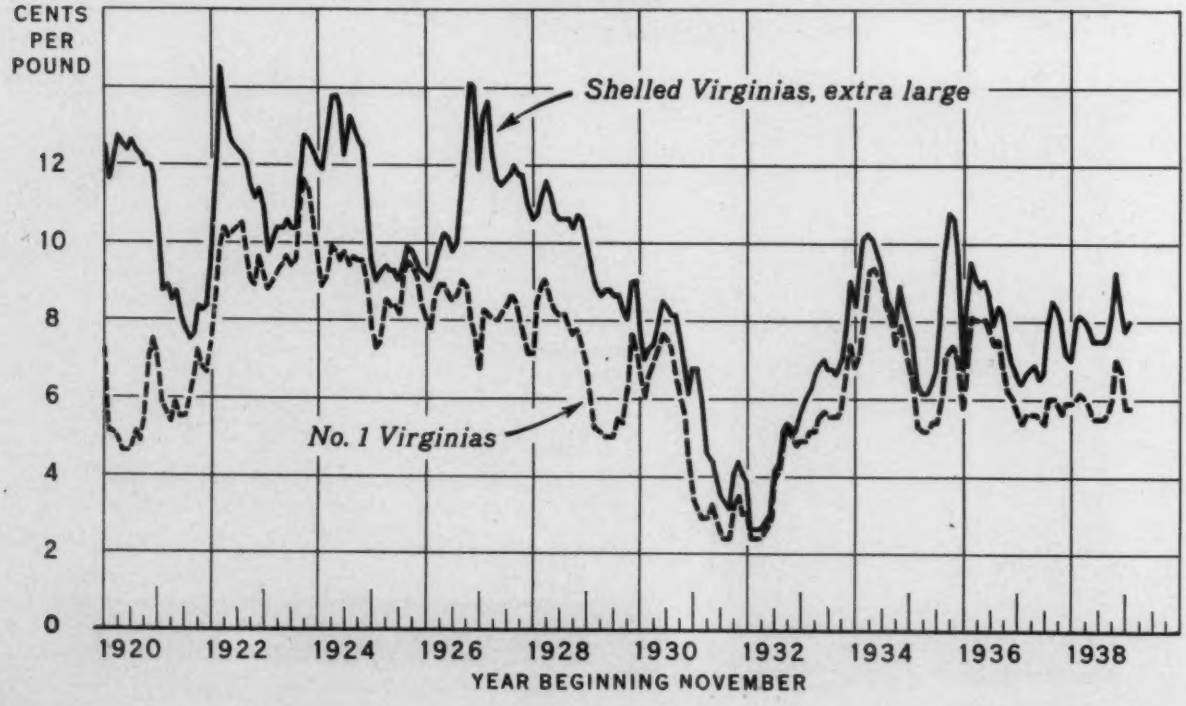
No figures are available as to the volume of peanuts bought by candy manufacturers but trade estimates suggest that during recent years in the neighborhood of 175 million pounds of farmers' stock peanuts have been marketed annually in the form of peanut candies.

Slight Decline in Use for Candy

The largest use of peanuts by confectioners is in candy bars, and the production of candy bars is on the increase. Peanuts, however, are not so popular a "filler" for these bars as they were some years ago. They have been somewhat supplanted by malted milk, marshmallow, chocolate, coconut, almonds, cashews, pecans, and various other products which the manufacturers consider either cheaper or more acceptable to the public taste than peanuts. Peanuts are used in so-called nut rolls, flat uncoated bars, chocolate-coated bars, squares, peanut brittle, sugar coated or "burnt" peanuts, and various other confections. The center of the industry is Chicago, but New York, Philadelphia, Boston and many other cities have factories in which the manufacture of peanut candy is an important business, and small candy concerns all over the country find a good demand for peanut brittle and sugar-coated peanuts and to a lesser extent, for other peanut candy products.

The candy industry is not alone in the extent to which the competition of other products has lessened the utilization of peanuts. Partly as a result of increased import of cashews and the increased salting of domestic "tree nuts", salted peanuts are also relatively less important than they were 20 years ago. The output of peanut butter, on the other hand, has increased, and probably 50 percent more peanut butter is being manufac-

**Agricultural Marketing Service, U. S. Department of Agriculture.*



tured now than was the case 10 years ago.

Virginias, Spanish and Runners are all used in making peanut candy. As the flavor of the peanut is appreciably masked when a large quantity of chocolate is used, even Runners are considered acceptable in chocolate bars. For making peanut brittle, "burnt peanuts", or flat bars such as peanut squares, Virginias or Spanish are preferred by manufacturers to Runners because they have acceptable flavor.

Boll Weevils Caused Increased Peanut Production

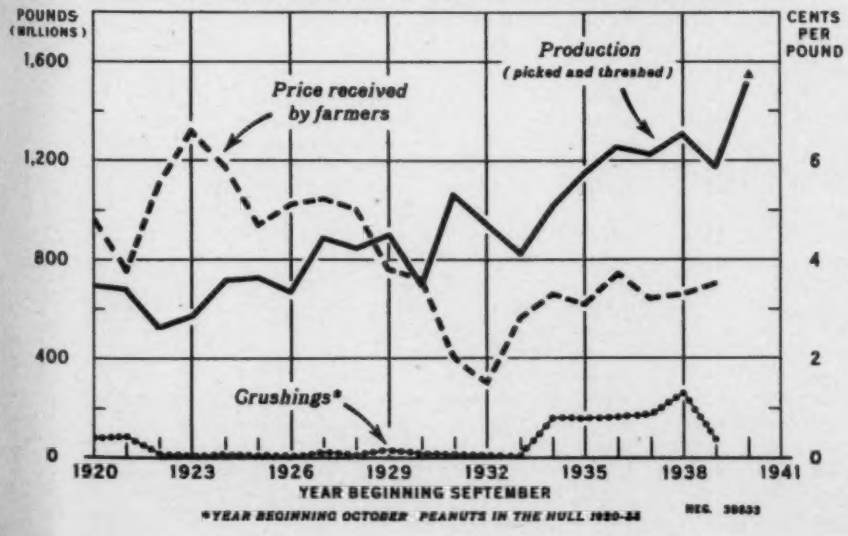
The past 20 years have seen a gradual increase in the production of peanuts for market. By 1921 the peanut industry was well established in all the sections in which peanuts are now raised commercially. Several years previous to that date the swift advance of the boll weevil eastward through the Southern States, with its ruinous effect on the cotton yield in many large areas, had caused the farmers to turn to other crops. The peanut promised the farmers a market, either directly at shelling or crushing mills or indirectly at pork-packing plants, and a supply of fine quality hay. A wave of peanut growing therefore swept over the Southern States between 1908 and 1918 and the acreage of peanuts increased very rapidly. At the time of the World War and shortly thereafter, large quantities of peanuts were crushed for oil, but after the year 1921 crushings were restricted to low-grade peanuts or pickouts and screenings in the mills until 1935. Since then the Peanut Diversion Program has resulted in large, though widely varying, crushings of farmers' stock peanuts.

Marketing Quota Now Approved for Peanuts

The approval of the use of marketing quotas for peanuts for the years 1941, 1942 and 1943, in a referendum vote by growers taken on April 26, 1941 can be expected to affect marketing procedure to some extent during the coming season. Details for handling the coming crop, however, have not been worked out by the Department of Agriculture as we go to press.

Encouraged by increasing business and by the outlook for lessening unemployment during the coming season, which will make more money available to the average household, manufacturers are looking forward with optimism to more sales of candy during 1941. And producers and millers of peanuts are hopeful that a fair proportion of this increased business will be in the form of candies containing peanuts.

PEANUTS, FARMERS' STOCK: PRODUCTION, PRICE, AND CRUSHINGS, UNITED STATES, 1920-40



Pecans Rate High As Candy Ingredient

by E. G. MARSH, Jr.

R. E. Funsten Co., St. Louis, Mo.

E. G. Marsh, Jr.

IN a very recent report of the Department of Commerce, Bureau of the Census, Washington, D. C., it is authoritatively stated that nuts rank second in dollar value, and third in total number of pounds in the long list of materials used by the Confectionery Industry.

While there is no definite statement in this particular report which would indicate which nuts are the most popular in confectionery, nevertheless in Bulletin No. 324 issued by the United States Department of Agriculture, Washington, D. C. entitled "An Economic Study of the Pecan Industry", a survey was made with consumers to determine their choice of specified nuts, assuming that the price of all kinds were the same. In this survey Pecans outranked all other nuts in popularity by a wide margin. In fact, the ratio was about 2½-1 to the second nut, 6-1 to the third nut, 10-1 to the fourth nut, and about 6-1 to the fifth nut. As stated, this survey is based on the assumption that the prices of all nuts would be the same.

The pecan is native to the United States. The production of pecans in recent years has increased tremendously, and the consumption likewise has increased. Pecans in general are divided into two classifications. There are the wild or seedling variety of pecans, and the papershell or improved variety of pecans. In production the wild or seedling variety leads the papershell or improved variety by a considerable margin, and it is the wild or seedling variety which is used primarily as shelled

(*Turn to page 70, please*)

TAXATION—

(*Continued from page* 43)

actual sales price of the candy, and 1/21st the tax. The manufacturer then paid tax on 20/21sts, the actual selling price. He was, in fact, merely a collector of the tax, forwarding it to the government.

If he did not use such notice, he paid the tax on the full invoice price, thus either "absorbing" it or, if the tax was included in the price, paying a tax on the tax. Both practices were condemned vigorously by many as essentially price-cutting.

Later, as I recall, to obviate this condition the Treasury Department ruled that the tax could not be "covered up" in the sales price *unless* the notice mentioned was used, and also that "Mere statements that the price includes the tax do not operate to exclude any part thereof from tax."

Obviously, if the tax were *added* to an invoice as a *separate item* and *so identified*, the notice mentioned above was not necessary, and the manufacturer paid as a tax the exact amount added to the invoice.

Then, the government had no objection to the people's knowing *they* were being taxed. Now, the government appears to favor hiding taxes just as much as possible.

How About Retailers?

Retail candy manufacturers, if they passed on the tax to customers buying "over the counter," were required prominently to display a sign: "Properly worded, of such a size, and so posted, that a customer's attention would naturally be attracted to it, to the effect that a definite portion of the quoted price represents the selling price and a definite portion the tax." In the case of the 5% tax, it would be 20/21sts and 1/21st.

The Treasury Department also ruled that retail candy manufacturers who "customarily sell at both wholesale and retail in *substantial* quantities," could compute the tax on the prices for which like candy was sold at wholesale. In other words, the tax basis of their sales was their wholesale prices.

How Much Was Paid?

The 5% tax paid by candy manufacturers for the years 1919, 1920 and 1921 amounted to approximately $52,000,000. For the year 1920 alone it amounted to nearly $24,000,000. This was the year of extremely high prices, largely due to the sugar situation. In June of that year, standard granulated sold at the top price of 22c per pound wholesale. Six months later the price was 8c.

In considering the amount such a tax would raise today, the effect of that sugar situation must be considered.

For How Long?

The tax of 5%, effective Feb. 25, 1919, was reduced to 3% on Jan. 1, 1922, and to 2% on July 6, 1932. It finally was repealed May 10, 1934. The candy industry, therefore, was burdened with an excise tax of from 5% to 2% for a period of 12 *years*, due to the necessity for World War revenue and the reluctance of taxing bodies to abandon taxes once imposed.

What About Today?

As I have said, there is a striking parallel between today and 1921. We have been informed that the Ways and Means Committee are *thinking* about imposing Excise Taxes on a long list of consumer goods, including a 5% tax on candy.

That was to be expected. They are hard pressed by the Executive Branch for tens of billions for defense and other purposes. Going over the Excise Taxes paid by various industries during and after the World War, the Committee was bound to discover the possibility of the candy industry, on a five year basis, being good for about 100 million dollars.

The Committee, therefore, has put out a "feeler" on a 5% excise tax on candy manufacturers' sales, which they estimate ought to bring into the Treasury about $20,000,000 per year.

Once again the question of equitable taxation arises; the fact that if candy is taxed, in all fairness directly competitive food products should be taxed equally.

When in 1918 we argued that candy should not be taxed because it was a *food*, and that *no food* should be taxed, the Committee merely smiled . . . and voted a 5% tax on candy.

That is exactly what the Candy Industry is up against right now, despite the public's augmented knowledge of candy's food value. And despite current government reluctance to impose taxes which the average individual will know he's paying.

The consumer, of course, *will* pay. He always does, ultimately. In general terms, the excise taxes paid by business will be passed on, directly or indirectly, to consumers, although profits may be jeopardized in the process. Today the government recognizes, however, that there are millions who *cannot* pay taxes, at least not directly and in volume. It looks to those able to pay, and to industry, to assume the bulk of the tax burden. Tens of billions in taxes will have to be collected. This means that we, as a people, individually and collectively, are going to have to practice the most rigid economy in our personal, business and governmental affairs, and develop individual and national thrift.

We must look to the future, in the light of experience of the past. As regards the candy industry, in my General Report to the 1918 N. C. A. Convention, as Secretary-Treasurer and a member of the Food Administration, I said:

> "The future salvation of the confectionery industry, in my opinion, depends upon our ability to firmly fix in the public's mind the food value of candy and to create a favorable public sentiment towards our industry, which when a crisis develops, will not countenance the classification of candy as a non-essential, but which will demand that it be given its right place as an essential food product."

Those words, too, hold good today.

March Sales Up 22 Percent Over 1940

Sales of confectionery and competitive chocolate products by manufacturers were 22% greater in March than during the same month of 1940, according to figures released by Vergil D. Reed, acting director of the U. S. Bureau of Census. The increase over the corresponding month of the preceding year is the largest recorded by this study during the past five years. Sales during the first three months of this year were 14 percent higher than for the same period in 1940. This increase in sales between February and March was reported as 4 percent this year. Trends are based on the reports of 212 manufacturers, reporting sales of $23,984,000 in March 1941. No adjustment has been made for seasonal or price fluctuations. Five of the eight geographic divisions showed gains from the same month of a year ago exceeding 20 percent. Average value per pound received for all types of products decreased slightly, 15.3 cents in March 1941, as compared with 15.6 cents for March 1940. The average value per pound shown for packaged goods fell 1.8 cents from March 1940, and rose 1.7 cents from February 1941.

This is Progress: Fondants Cooked and Cooled . . ready for the beater in 10 minutes

BY THE SIMPLEX VACUUM COOKING COOLING SYSTEM

The "Simplex" Vacuum Unit shown above (with one 5 foot cream beater) is actually producing 800 pounds of Fondant per hour.

Patented

Do you really know how the finest fondant can be (should be) produced on a production basis by the most economical method? Not any so-called fondant, but the type produced every day by the big-name Candy *Manufacturers.*

The Simplex Vacuum Cooking and Cooling Unit for Hand Roll or Cast Cream is now furnished in various sizes—from 100 pound batches to 800 pound batches—protion 200 pounds per hour to 2400 pounds per hour.

Send in the coupon for list of users and full details on the results leading confectioners are securing.

VACUUM CANDY MACHINERY CO.

15 Park Row **New York, N. Y.**

VACUUM CANDY MACHINERY CO.
15 Park Row, New York, N. Y.

Please send me, without obligation list of users and complete information on the SIMPLEX Vacuum Cooking and Cooling System for Fondants.

Name.....

Firm.....

I am particularly interested in Hand Roll Cream ..... or Cast Cream ..... or both .....

Address.....

City..... State.....

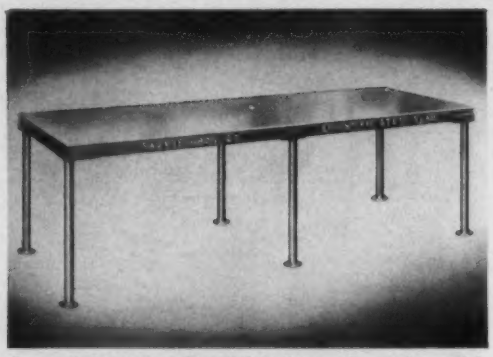
"Simplex" on display N. C. A. Convention, Chicago, Booth 25

MACHINERY—

(*Continued from page* 41)

One has only to glance through the Machinery and Equipment section of the Manufacturing Confectioner's BLUE BOOK to see how many items are available in the field of smaller equipment. The inherent value of this book is truly unique and, in my opinion, it should find a favored place on the personal bookshelf of every production man, superintendent and head mechanic in the industry.

In the field of packaging machinery the past 10 years have been most fruitful, and it is here that the era of specialization is in the forefront. Marvelous jobs of great ingenuity have been perfected to effect efficient mechanical packaging of different candy items. The variety of items that can be wrapped, the types and styles of materials used, as well as the capacity of the machines for turning out work in great volume—all have been tremendously increased, developed and perfected. Package Machinery Company's machines for packaging purposes are of note particularly since this is the oldest and foremost firm in the field. Their Model K kiss cutting and wrapping machine is an old friend; the CA-2 is a father whose progeny, it is claimed, are wrapping 80% to 90% of all the candy bars produced in the U. S. Modern Equipment Company's "wrap-o-matic" machine, which is designed for wrapping bars and individual pieces of odd or irregular shape is another device of note, combining engineering beauty with efficient fast handling of various-sized items.



Savage's heating-cooling slab is designed as to be useful for a variety of uses.

Package Machinery's model DF can be placed right alongside the enrober delivery belts for wrapping bars and kindred products, so little working space does it take up. Bag-making and bag-filling machinery covers such a wide variety and number of manufacturers that it would be most difficult to include all types. However, Stokes-Smith's machine must be mentioned especially because it completes the entire cycle of operation, from making the bag from rolls of material, to filling it with pre-determined amounts of candy, and finally, to closing the bag—all within a shorter space of time than it takes to tell about it. Then there are the Triangle "elec-tri-pack" machines for similar work. Bag-making machines as such were given great prominence at the Packaging Exposition this year, at least four different makes and models being exhibited. The "bag-o-matic" and "clipper" models, offered by Mr. Bunn of the famous "Bunn Tyer" and by Modern Containers, Inc., respectively, are especi-

(*Turn to page* 52, *please*)

SAVAGE at the N.C.A. CONVENTION

Booth 74

Again, as in the past, the SAVAGE booth at the Confectionery Industries Exposition will be the meeting place for production men—where you can "talk shop" with machinery experts who know your problems and most of the answers.

At Our Warehouse

Gaebel Automatic Plastic Outfit
Hansella Plastic Machine, with Conveyor
Model LP Sucker Wrapping Machine
Model KD Cutting and Wrapping Machine
Model KH Caramel Stick Cutter & Wrapper
National Continuous Cooker
Late Model Simplex Cream Vacuum Cooker
24" & 32" National Enrober (Complete Unit)
Pitco Frialator, Gas Fired (200 lb. Size)
5 ft. Racine Snow Plow Cream Beater
Hayssen Cellophane Box Wrapper with Electric Eye
Miller Combination Sheeter and Sealer
16", 24", 32" Economy Turn Tables
50 Gal. Model F6 SAVAGE Tilting Mixer

OUR Display will feature the SAVAGE Scientific Water Cooled Steel Slab, Starch Brushing Machine, Syrup or Chocolate Pump, Open Fire Kettles and Furnace. Our entire sales and service staff will be there to greet you.

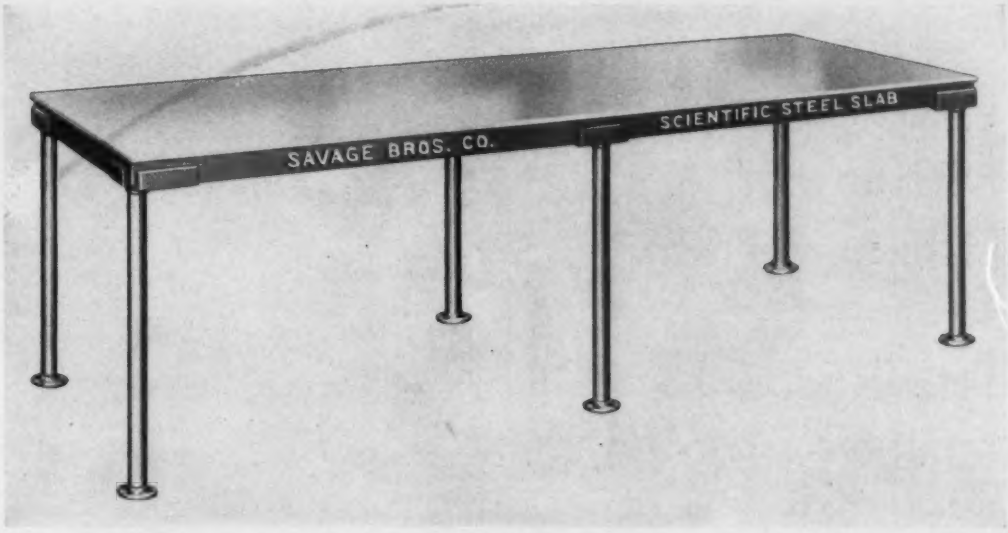
At the left are listed some of the most important items of Used and Re-Built Machinery and equipment we have at our warehouse. If you don't see what you want, ask one of "the boys" to drive you out to our Plant. Automobiles have been provided for your convenience, and you can come and look the place over, without obligation.

SAVAGE BROS. CO.

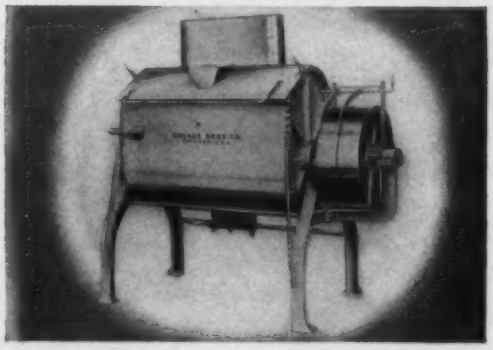
CHICAGO **2638 Gladys Avenue** **ILLINOIS**

SAVAGE WILL SAVE YOU MONEY

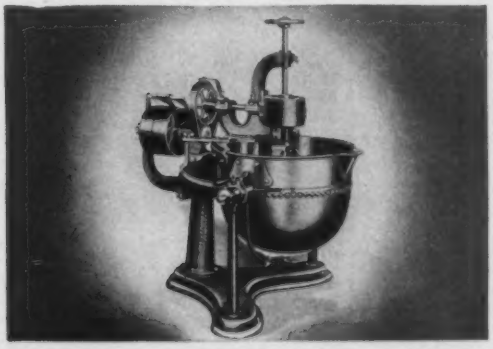
Machinery and Equipment made by SAVAGE has set an 85-year record for low-cost operation and maintenance. Close cooperation with confectionery manufacturers enables SAVAGE to anticipate your own needs.



SAVAGE SCIENTIFIC HEATING-COOLING SLAB. Even heating or cooling at all times. *No hot spots.* Will cool 20% faster. Withstands 125 lb. working pressure. Legs adjustable. *Completely fool-proof.* Perfect for Bottomer Cooling Tables.



TILTING MIXER. Adaptable for caramel, nougat and coconut batches. Double action agitator. Belt drive or motor drive. Sizes 25, 35 and 50 gallon.



OVAL TYPE MARSHMALLOW BEATER. 100% sanitary. More heating space for volume. Faster heat discharge. Quick cooling. 15 and 2000 pound sizes. Belt or motor drive.

We manufacture a full line of machinery and equipment for the confectionery plant. Write for descriptive literature. Exclusive manufacturers of the labor-saving SISCO NUT ROLLING MACHINE. It pays to check with SAVAGE before you buy.

WRITE OR WIRE FOR FULL PARTICULARS

SAVAGE BROS. CO.

2638 GLADYS AVE., CHICAGO, ILLINOIS

Birthday Greetings!

on our

75th Anniversary!

Have you tried

CONFECTIONERS FLOUR NO. 10

Confectionery manufacturers are finding this Stein Hall product unexcelled for Nougat Cream.

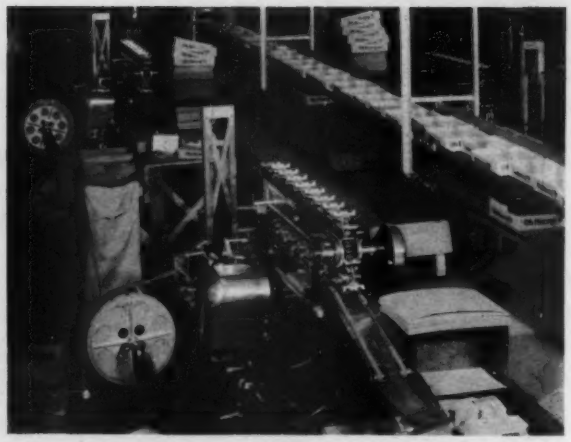
Look to the Stein Hall Research Laboratories for technical help and to our Confectioners Service Division for your supplies of

★ Thin Boiling Starches
★ Cocoanut
★ Tapioca Flour
★ Rice Flour
★ Pure Food Dextrines
★ Moulding Starch

BOOTH 38-B
Confectionery Industries Exposition

STEIN HALL MFG. CO.

2841 South Ashland Ave.
CHICAGO ILLINOIS



"Wrap-O-Matic," the newest machine developed for mechanically wrapping irregular shaped bars.

ally interesting for bulk candy and hard goods manufacturers.

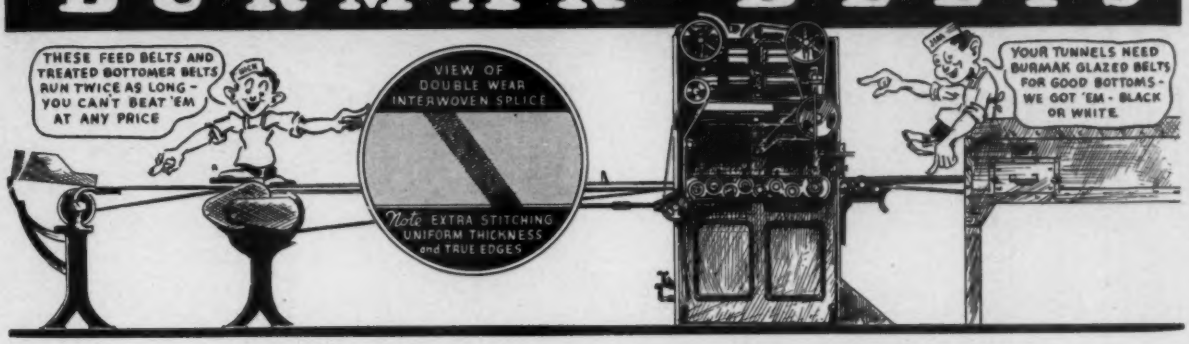
Machines for over-wrapping cartons or boxes with various materials are a development of the wide acceptance of transparent wrapping materials for all types of foods. There are, again, many manufacturers offering such machines, among them Package Machinery Company with its model FA-Q; the Redington Company's various models (all developed from the original Redington machine for gum-wrapping); the Hayssen Company's machines, and many others.

In the field of wrapping lolly-pops, one machine stands out—Package Machinery Company's model LP-2. The Rose machine, made in the U. S. by American Machine and Foundry Company, was developed in England. It is widely used for wrapping caramels, toffees, hard candies and chocolates and is an example of super-ingenuity from whichever point of view you regard it. In the past years the speeds have been doubled and even tripled. For example, the Rose toffee wrapper will form, cut and wrap toffee or hard candies at a speed of 850 a minute, compared with a maximum of 200 per minute 10 years ago. Chocolate Fil wrappers will handle 140 pieces per minute; and Caramel wrappers up to 500 per minute. In this connection should also be mentioned the printing attachment now available for the Rose wrappers, called "sham-bon," which prints the individual piece wraps as they are used.

And here, I feel, we have reached the point of taking inventory, for otherwise we could go on for days and never reach a real "finis." It is in looking over the inventory that one is compelled to say: "Much progress has been made." Quite naturally, on the other hand, it is possible to remark: "And much more can and will be done." My personal reaction is, however, that if the industry in general will discard some of the old models and adopt more of the available new and improved ones, we will all be better off for it. That means capital to be invested. Before investing, it must be earned. It can hardly be earned with old machinery and equipment; and so, we are face to face with one of the many "vicious circles" that beset the progress of our industry.

May the troublous seas into which we are sailing at this writing, become becalmed in the near future and permit mankind to resume its peace-time efforts, ideals and hopes.

BURMAK BELTS


THESE FEED BELTS AND TREATED BOTTOMER BELTS RUN TWICE AS LONG - YOU CAN'T BEAT 'EM AT ANY PRICE
VIEW OF DOUBLE WEAR INTERWOVEN SPLICE
Note EXTRA STITCHING UNIFORM THICKNESS and TRUE EDGES
YOUR TUNNELS NEED BURMAK GLAZED BELTS FOR GOOD BOTTOMS - WE GOT 'EM - BLACK OR WHITE

STEPPING UP THE TEMPO

To meet the demand for belts of longer life—producing better bottoms BURRELL still leads the field with its ALL-STAR Cast:

See them at **BOOTH No. 34** N. C. A. Convention June 2-5

★ CRACK-LESS Glazed Enrober Belting
★ THIN-TEX CRACK-LESS Glazed Belting
★ White Glazed Enrober Belting
(Double Texture; Single Texture; No. 300)
★ Innerwoven Conveyor Belting
★ Feed Table Belts (endless)
★ Cold Table Belts (endless)
★ Caramel Cutter Belts
★ Caramel Cutter Boards
★ Batch Roller Belts (patented)

"BUY PERFORMANCE"

BURRELL BELTING CO. 401 So. Hermitage Av. Chicago

CORN PRODUCTS—

(*Continued from page* 42)

Just before the American entry into the World War, a physician in the St. Louis Children's Hospital began experimenting with infant diet. His name was McKim Marriott and he was a pediatrician, or baby doctor. As a supplement to cow's milk he had been using a German preparation, largely composed of dextrose, maltose and dextrin, and when the war cut down the supply he looked around for a similar composition that could be bought at prices more reasonable than the German product or the domestic equivalents sold at drug store prices.

Marriott discovered that corn syrup was essentially a wholesome, easily digested carbohydrate as good as, if not superior to, the proprietary baby foods and he began publishing papers on the subject in the medical journals about 1919.

The results are now well known. Thousands of doctors, advising hundreds of thousands of mothers have made corn syrup one of the best accepted foods in America and an ingredient that any confectioner can be proud to include in his product. It is interesting to review the press reports on the birth of the Dionne quintuplets, announcing that the babies were fed a mixture of "corn syrup, milk and water." There, with the addition of a few other items, is a typical formula for a dozen different popular candies!

Corn syrup, of course, is not the only product which finds its way from the cornfield to the confectionery retailer's shelf. Corn sugar, fully refined and crystallized in the two types of commercial dextrose had the same common background of the Kirchoff experiments of Napoleon's time. But the sugar presented a more difficult technical problem.

The same Dr. Arno Behr whose name is so prominent in corn syrup history developed a form of anhydrous dextrose in 1881 and undertook its manufacture through a Chicago company without success. In later years several manufacturers produced what is still known as "corn sugar," a crystallized product slightly tinted in color which has numerous important technical uses, but is of no interest to confectioners.

It was not until 1922 that William B. Newkirk perfected a practical commercial method for making "refined corn sugar," or "dextrose," pure white in color and with its own special properties and effects on texture and other characteristics when used in confectionery and other food products. Shortly afterwards, Newkirk followed this with the present "anhydrous dextrose."

Other products of even more recent development are the dried corn syrups and the "high dextrose" syrups. Dried corn syrups are marketed in the same form as a sugar and are handled dry. They are known as "dehydrated corn syrup," and as "corn syrup solids." According to the method of preparation they have distinct characteristics and have found a ready place in many formulas. The "high dextrose" syrups are freer flowing than the conventional syrups and are somewhat sweeter.

As time moves forward it appears that the confectionery industry will continue to be well served by the cornfields of America, with new products and new modifications of older products to fit new needs and to solve old problems.

Air conditioning - -
Constant fair weather for candy

by VERNON CANO*

Progress of air conditioning for candy plants in the past two decades has been little short of revolutionary. The pace for the future will, perhaps, be more of an evolution and less of a revolution.

The candy plant has been the proving ground for much of our present food industry air conditioning. Today it ranks highest in H. P. for air conditioning of all industrial or manufacturing classifications. And even 20 years ago much was known and had been accomplished in candy plant cooling.

A series of articles appearing in the 1922 Summer issues of THE MANUFACTURING CONFECTIONER, written by Mr. Lissauer, illustrates clearly that at that time candy plant cooling was extensive and accepted as a necessity. But real air conditioning as we understand it today was only coming into practice. Mr. Lissauer explained in detail "washed air" as a new principle. Little or nothing was being done with planned circulation of air, air drying and thermostatic control.

Among the factors that have hastened installation of air conditioning in candy plants are, of course, the greater perfection and efficiency of air conditioning equipment and lower first cost and operation cost; the trend to "all year production," greater specialization in manufacture and a tendency to larger plants. The cost of air conditioning in proportion to candy manufacturing volume has fallen drastically.

One could say that the whole conception of air conditioning has changed from an attempt to simply "cool" a production room in order to make candy set, to reproducing the perfect weather condition every single day not only for temperature, but for humidity, air purity and air distribution. In addition, the new conception recognizes the different conditions required for each separate operation, providing the best "conditions" for storage to the stock rooms, for chocolate operations to the dipping room, and for hard candy to the hard candy department.

Without attempting to evaluate each change, let us review some of the equipment changes which have contributed to the progress of candy plant air conditioning.

"Washed Air". While the principle of washing air, to dehumidify and cool it, had been worked out before 1921, its actual application in candy plants has occurred in the past two decades. The importance of washing air to increase purity was hardly appreciated, and Mr. Lissauer speaks only of its importance in cooling air and thus reducing it's total moisture content. Today "washed air" is a part of all central cooling systems and many of the larger unit room coolers.

"Air Movement." Twenty years ago the air cooling systems depended for circulation upon the natural movement of cooled air, and no practical "control" of this movement was made. Tremendous strides have been made, both in efficiency of air conditioning and in economy by controlling the movement of air and delivering conditioned air directly to the places where it is needed. Perhaps no greater strides have been made than in the better use of air movement, outside air, etc. outlet designs and blower equipment.

"Thermostatic Control." Fully automatic control of the air conditioning system has been perfected in this period, making the maintenance of a given condition dependable and accurate.

"Dehumidifiers." The development of the lithium chloride or silica gel method of moisture removal from the air and its use in candy plants belongs to the newer systems of the past 10 years.

"Refrigerants." Today in some cities the use of direct expansion ammonia in areas above the first floor is not permitted by local ordinances. Therefore it is necessary to use either cold brine or resort to a refrigerant such as Freon, which is permitted by law.

"Economy in Compressors." Very considerable progress has been made in the efficiency of compressors, cutting power and repair costs.

"Cooling Tunnels." The necessity of cooling tunnels, even in fully air conditioned plants has been realized and candy plant equipment manufacturers have developed excellent "cooling tunnels" which have made "spot conditioning" in the candy process practical. Sometimes these cooling tunnels are used in plants which have no other air conditioning except in the storage room.

"Unit Conditioners." A comparatively recent development has been the unit conditioner (most usually a dry coil unit) which may be set up independently in a room and which will deliver an established condition, which can be satisfactory if the limits of the unit are engineered to the requirements of the room.

It hardly seems necessary to point out the value of air conditioning in quality production control. Most candy men know the effect of adverse temperature and moisture conditions in hard candy graining, chocolate coating graying, spoilage, and process troubles. Yet, the very fact that this industry has been forward in air conditioning has resulted in too many installations existing which need remodernizing. And the new equipment and air conditioning engineering has so advanced that today modern equipment is practical for even small plants and the cost of new installation or modernization will pay for itself in production savings.

*Cooling and Air Conditioning Div., B. F. Sturtevant Company, New York.

THE INDUSTRY'S CANDY CLINIC

HELD MONTHLY BY THE MANUFACTURING CONFECTIONER

Fourteen Years of Candy Clinic Analyses

The Candy Clinic was started 14 years ago as a means by which candy manufacturers could get a true picture of their candies as these appeared on the store counters and were purchased by the public. It is the only known service given by a business publication, entirely without charge, for check-up on the finished products of any industry, and it has achieved world-wide fame. It does not give "seals of approval" and it is not designed to furnish advertising claims for candy manufacturers. Its sole purpose is to help manufacturers improve the methods of storing and handling in both wholesale and retail outlets. Mr. Lehman has conducted the Candy Clinic from its earliest beginning.

by **ERIC LEHMAN**

THE Candy Clinic began its career 14 years ago, six years after THE MANUFACTURING CONFECTIONER began publishing. During this time, the Clinic has examined 4,397 samples of all types of candies. We hope we have helped candy makers and manufacturers in improving their products, packaging, etc. All manufacturers and candy makers feel their products are the best. We of the clinic have always made our analyses of the samples sent to us in a fair and open-minded way. No doubt, our analyses have been a disappointment to you at times, but we are practical candy makers and have made all types of candies including chewing gum and medicated candies. There have been times when your samples have arrived in bad condition, either because of weather conditions or perhaps they became old on the counters before they were purchased by our shoppers to be analized. We have suggested a number of times that manufacturers themselves purchase their products in the open market and analyze them; we feel sure that they would be surprised to find out that their products often do not "stand up". Many times we find that good raw materials were used but the workmanship was not of the best. We also find that many times the wrapper or packaging is not the proper type for certain kinds of candy, to withstand weather conditions or distant shipping.

Fourteen years is a long time and we have seen a number of changes in the candy business; also, in the candies of all types. Can you recall a number of manufacturers who made nothing but pan goods? Today we do not know of one large house that is turning out pan goods exclusively; they have gone out of business or added a number of other types of candies. So we see very little pan goods on the market. Undipped marshmallows once were a big seller and we knew of two large manufacturers who turned out nothing but marshmallows. Today they are out of business. We find a few marshmallows in the chain grocery stores in sealed packages and we know of retail candy stores that do not carry marshmallows at all; either bulk or in packages. Again, caramels, wrapped and unwrapped, were sold in a large way in drug stores, grocery stores and retail candy sores; the market was flooded with all kinds of caramels. We could name a number of good eating pieces that "fell by the wayside". We all know the cause, poor quality. When the price was right, quality was good; when the price started to go down, so did the quality. The consumer could be fooled for a short time, and then he would not buy any of these candies at any price.

A word about centers and coatings "then and now". No doubt, there has been milions of dollars spent on research work on chocolate coatings and today, we of the Clinic can not tell what some of the coatings are made of. The sad part of it is all is they are going to make new standards in Washington for chocolate coatings that will contain a very small amount of real cocoa liquor and any kind of butter, and these coatings can still be called chocolate. We know there are manufacturers today who are making coatings in a big way that are not chocolate; of course, they do not call these coatings "chocolate." Sometimes we analyze chocolates and wonder what

the coating is made of. Milk chocolate coatings are almost impossible to pick out. Some have a good milk taste and contain a small amount of skim milk, a butter or milk flavor is used; some are rank with a butter flavor, some are tasteless, and some eat like lard.

The quality of centers has not improved any; we still find the same old jap jelly centers, tough cream centers, imitation flavors, hard tough caramels and chewy pieces, tough marshmallows, etc. The "old time" houses that are still in business are still turning out quality candies. The cheap houses are still turning out cheap candies. The good bar houses are still turning out good bars and good houses are still turning out quality bars. So, we of the Clinic can not see any change in candy manufacturing business.

Candy is selling cheaper today than it was 14 years ago. The dollar boxes are slowly passing out and the 69c to 79c packages are taking their places. Sixty-cent boxes are selling from 40c to 50c. Bars have remained about the same; bulk and pail goods are selling at cheaper prices. Hard candies both in jars and in pails are cheaper; gums, jellies and pan goods are cheaper, but, of course, we can look for higher prices.

Packaging of all kinds of candies has been greatly improved. Bar wrappers are outstanding. Box goods from 29c to one dollar are entirely different, very attractive, and cost considerable more than they did 14 years ago.

The miniature chocolates and the large pieces in the retail business are the leading sellers in the business today.

The Clinic is at your command and we hope we can be of some assistance to you.

56 Years
Seal of Service

Since 1885, when George Lueders and Company celebrated their first birthday, the confectionery industry has seen many changes take place in packaging, production and products.

Throughout these changing years, Lueders has kept astride progressive developments, and in many cases has advanced them.

Three business precepts, adhered to from the start, have guided them in their business relationships; Integrity, Reliability, Service.

In the future, as in the past, Lueders' associations in the confectionery industry will continue to be based on these traditional precepts.

George Lueders
& Company

427-29 Washington Street
New York
Established 1885

CHICAGO
510 N. Dearborn Street

SAN FRANCISCO
56 Main Street

MONTREAL, CANADA, 361 Park Royale

EASTER GOODS

CODE 5A41

Chocolate Covered Cream Egg 2 ozs.—5c

(Purchased in a delicatessen, San Francisco, Calif.)

Appearance of Eggs: Good. Printed red foil wrapper.
Size: Good.
Coating: Light, good for a 5c seller.
Center:
Color: Good.
Texture: Good.
Flavor: Good.
Remarks: One of the best 5c cream eggs we have examined this year.

CODE 5B41

Chocolate Covered Chocolate Marshmallow Egg—about 1 oz.

(Purchased in a retail candy store, San Francisco, Calif.)

Appearance of Piece: Good. Printed cellulose wrapper.
Size: Small for a 5c seller.
Coating: Dark, Good.
Center:
Color: Good.
Texture: Tough.
Taste: Good.
Remarks: Center needs checking up as it is too tough.
Suggest weight and address be printed on wrapper to avoid trouble.

CODE 5C41

Chocolate Rabbit—2 ozs.—20c

(Purchased in a department store, Chicago, Ill.)

Appearance of Piece: Good. Printed foil wrapper.
Size: Small for a 20c seller.
Coating: Light. Very cheap tasting.
Moulding: Good.
Remarks: Chocolate is not up to standard. We find better quality at 10c and 15c for this size piece.

CODE 5D41

Chocolate Nests—about 1 oz.—5c

(Purchased in a retail candy store, San Francisco, Calif.)

Appearance of Piece: Good. Printed cellulose wrapper—see Remarks.
Size: Good.
Piece is a half cream egg dipped in chocolate, flat has a border of chocolate, center is filled with small panned eggs.
Coating: Good.
Center:
Color: Good.
Texture: Good.
Flavor: Good.
Panned Eggs: Good.
Remarks: The best 5c novelty of this kind that the Clinic has examined this year.
Suggest address and weight be printed on wrapper to avoid trouble.

CODE 5E41

Marshmallow Eggs—120 count 1c each

(Purchased in a department store, Chicago, Ill.)

Appearance of Eggs: Good.
Coating: Dark, Fair.
Marshmallow Center:
Color: Good.
Texture: A trifle tough.
Taste: Fair.
Remarks: Center should be checked up as it is too tough.

CODE 5F41

Coconut Cream Egg—2½ ozs.—5c

(Purchased in a department store, Chicago, Ill.)

Appearance of Egg: Good. Printed cellulose wrapper.
Size: Good.
Cream Coating: Too hard. Color: Good.
Center:

Color: Good.
Texture: Good.
Taste: Good.
Remarks: Suggest a good coconut oil or butter be used in the cream coating to keep it soft.

CODE 5M41

Cream Rabbit and Egg
Crystallized—2 ozs.—10c

(Purchased in a retail candy store, New York City.)

Appearance of Piece: Good.
Size: Small.
Container: Cellulose bag silver printed paper seal clipped on top.
Colors: Good.
Texture: Good.
Flavors: Good.
Moulding: Good.
Crystal: Good.
Remarks: Pieces are well made and good eating; one of the best that the Clinic has examined this year.

CODE 5J41

Pecan Egg—1 lb.—75c

(Sent in for Analysis No. 4395)

Appearance of Package: Good.
Box: Silver with a slip lavender colored cover printed in deep lavender tied with a lavender grass ribbon. Eggs packed in purple cut wax paper. Egg wrapped in cellulose.

Egg is made as follows: Light chocolate nougat egg is dipped in vanilla caramel and rolled in pecan halves.

Nougat:
Color: Good.
Texture: Good.
Taste: Good.
Caramel: Good.
Pecans: Good.
Shape: Good.
Remarks: A very fine eating egg. Good quality and well made. Egg should be a good seller at 75c. Neatly packed and attractive container.

J L B J L

RASPBERRY
No. 9269
for your
Hard Candy - Cream Work

Samples of this exquisite flavor and others in the Long line, may be sampled in finished goods at our

BOOTH NO. 73
Confectionery Industries Exposition

James B. Long & Co., Inc.
CHICAGO 818 N. Franklin St.
NEW YORK 415 Greenwich St.

CODE 5P41

Maple Walnut Cream Egg
2¼ ozs.—5c

(Purchased in a drug store, Cleveland, Ohio.)

Appearance of Egg: Good. Printed foil wrapper. Outside wrapper of purple cellulose.
Size: Good.
Coating: Dark.
Color: Good.
Gloss: Fair.
Taste: Fair.
Center:
Color: Good.
Texture: Good.
Flavor: Rank.
Remarks: Maple flavor was so strong

At the N. C. A. Convention

CURRIE
AUTOMATIC STACKER
FOR METAL AND WOOD STARCH TRAYS

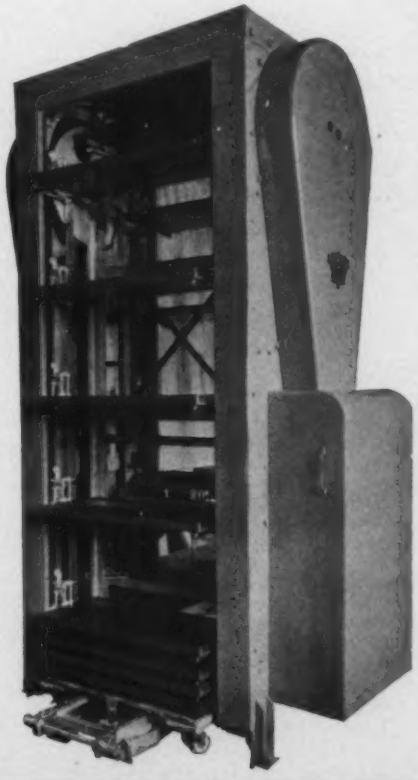
NEWEST development in confectionery equipment, yet already giving complete satisfaction in some of the largest plants in the Industry. Reduces operating costs, speeds up production and effects savings in labor.

This machine will make absolutely plumb stacks of starch trays as these come off the mogul. Gear-timed to expel a predetermined number of trays. Will operate as fast as the mogul and automatically times itself to the speed of the mogul. By actual tests will handle more trays per day than by manual stacking. Adaptable for either dolly or lift truck conveying systems.

SEE IT OPERATE!
BOOTH 15
Confectionery Industries Exposition

Lubrication has been reduced to a minimum through installation of a centralized lubrication system.

All working parts completely enclosed for safety and cleanliness. Interchangeable parts — chains, pulley, sprockets, belts, gears — are standard and readily available. AC or DC operated. Zerk fittings for easy access to few manual lubrication points. Highest quality materials used throughout.



Write TODAY for Further Information

CURRIE MANUFACTURING CO.
CHICAGO 1837 W. Grand Ave. ILLINOIS

Perfect COMPANIONS

Merckens Chocolate is an ideal companion for your ice cream. Whether used in making chocolate ice cream, or in syrups for sundaes and sodas, the flavor of Merckens is the perfect foil for fine ice cream.

Branches and Agencies:
New York • Boston • Los Angeles
Handler & Merckens, Inc., Chicago
W. H. Bintz Co., Salt Lake City, Utah
Western Bakers Supply Co., Denver, Colo

MERCKENS CHOCOLATE CO. INC.
Seventh and Jersey Streets, Buffalo, New York

it was rank. We could not take the second bite. Suggest the flavor be checked also the amount used.

CODE 5L41

Coconut Nest—about 2½ ozs.—10c

(Purchased in a candy shop, San Francisco, California)

Appearance of Piece: Fair—see Remarks.
Novelty is a milk dipped thread coconut shaped round panned colored eggs are stuck in the middle.
Coconut: Good.
Panned Eggs: Fair.
Remarks: Suggest piece be wrapped in a cellulose wrapper. Eggs are entirely too hard and lacked flavor. The idea of the piece is very good but the quality of the eggs should be improved.

CODE 5S41

Chocolate Marshmallow Rabbit 2¼ ozs.—5c

(Purchased in a drug store, Cleveland, Ohio.)

Appearance of Package: Good, for a 5c number. Printed glassine bag in colors.
Coating: Fair.
Center:
Color: Good.
Texture: Tough.
Flavor: Good.
Moulding: Good.
Remarks: Suggest formula be checked as marshmallow was very tough.

CODE 5Q41

Chocolate Moulded Decorated Cross—1½ ozs.—10c

(Purchased in a candy shop, San Francisco, California.)

Appearance of Piece: Good. Printed cellulose wrapper.
Size: Good.
Coating: Dark, good for a 10c seller.
Center: Peppermint cream.
Color: Good.
Texture: Good.
Flavor: Good.
Sugar flower decorating: good.
Remarks: A good looking Easter novelty and well made. The best 10c Easter novelty that we have examined this year.

CODE 5R41

Fruit and Nut Egg—1 lb.—45c

(Sent in for Analysis No. 4394)

Appearance of Package: Good.

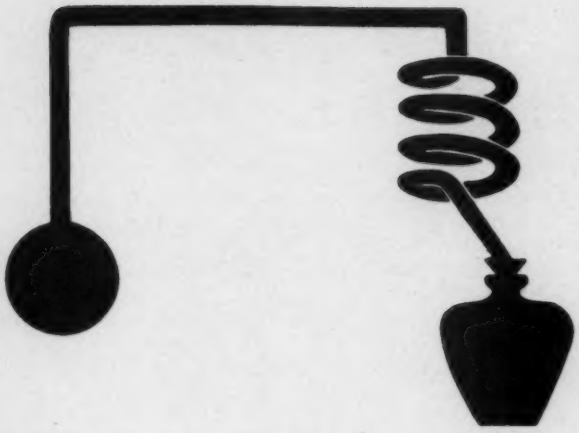
Box: Purple, full telescope, printed in deep purple, tied with lavender grass ribbon. Egg packed in purple cut wax paper.
Coating: Dark.
Color: Good.
Gloss: Good.
Dipping: Good.
Taste: Good.
Shape: Good.
Center:
Color: Good.
Texture: Good.
Flavor: Good.
Remarks: Egg is well made and of good quality. The best fruit and nut egg that the Clinic has examined this year; at this price, egg should be a good seller.

CODE 5W41

Crate of Eggs—2 ozs.—10c

(Purchased in a department store, Chicago, Ill.)

Appearance of Package: Good. Wooden crate containing colored pan marshmallow eggs, cellulose wrapper.
Colors: Good.
Panning: Good.
Flavors: Fair.
Center: Colors: Good. Texture: Too tough.
Remarks: A good looking 10c novelty but quality of eggs was not up to standard.



For

FLAVOR

AROMA

STABILITY

Try

"Baja Brand"
Oil of Lemon
U.S.P.
Oil of Orange
U.S.P.

SOLE DISTRIBUTORS

STANDARD SYNTHETICS, Inc.
119 West 25th Street, New York, N. Y.

T. M. DUCHE & SONS, Inc.
117 Hudson Street, New York, N. Y.

SWEET 17

17 GRADED SIZES
SWEET • SOLID
SALABLE

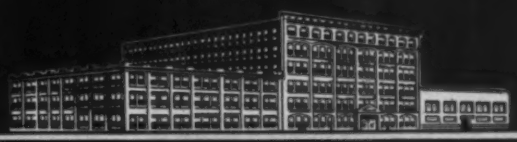
FUNSTEN PECANS

THE FUNSTEN line of pecans is the answer to a candymaker's prayer. Seventeen different sizes in halves and pieces. No time and money wasted sorting or chopping. The correct size for your every requirement *at your fingertips*. No wonder candymakers say the Funsten way saves time and money-makes every pecan confection just right.

And here's the rest of it in a nutshell. FUNSTEN shelled pecans are always fresh when they reach you. They're treated with our special vacuum process that keeps them at their best longer. Sweet, firm, full flavored pecans with low moisture content that makes good candies better. Other Funsten advantages are uniform quality, less siftings, fewer pieces and shrivels . . . More quality, less waste.

Order through your regular jobber or write us for name of nearest representative.

50 years experience concentrating on exclusive production of finer pecans. The large modern Funsten plant represents the last word in efficiency and sanitation.



R. E. Funsten Co.

1515 DELMAR BLVD. ST. LOUIS, MO.

CHOCOLATE—

(*Continued from page 37*)

of that of powdered sugar, about forty ten thousandths of an inch, down to a fineness of 6 to 8 ten thousandths of an inch in one or two passages through the finishers, whereas the old type machines required from three to six passages.

Today it is not unusual for large chocolate concerns to employ a staff of as many as 20 chemists and assistants to conduct the business of the laboratory whose duties are many and varied. Some laboratories function twenty-four hours a day checking the products from raw state through every process in their manufacture to the finished product. These laboratories are equipped with the most modern of scientific instruments too numerous to mention here. In fact, laboratory controlled chocolate products have become a by-word in the industry.

Perhaps it should be mentioned here that one of the outstanding advancements in relations between the manufacturer and buyer has been in the educating of the buyer of chocolate to its proper use. This has been accomplished by sending out experts to aid and educate users of chocolate.

The public taste for chocolates has varied, but appears to be for chocolates that are finely milled, of a mild chocolate flavor, and of light color. To meet this demand, light sweet chocolates of the types of milk chocolate, buttermilk chocolate, skim milk chocolate, and others of similar composition are produced in large quantities. Since color and flavor depends to a great extent on the percentage of liquor used, the limiting of chocolate liquor which can be used (by law), would result in great losses to the manufacturer, and would serve no useful purpose. The ingredients used in light sweet chocolates are common to chocolate manufacture, and their production is usually more expensive than a dark sweet type.

In the past the manufacturer of imitation chocolates, which are usually composed of cocoa, sugar, and a fat (not cocoa butter) were compelled to use cocoa powder of aproximately 12% cocoa butter content as a base. This amount of cocoa butter was found to be incompatable with the other fat. Thanks to extensive research conducted by one of the largest companies, a cocoa of pure quality is manufactured of which the cocoa butter content is less than 1%. This powder has many diversified uses, among which is the manufacture of imitation chocolates.

If one could look into the future of chocolate making, say some fifty years hence, one would probably be surprised at the difference in methods.

Machines will be built which will perform the functions of a conche without prolonged treatment.

Roasting machines will roast cocoa beans continuously to the proper temperature for the proper length of time to bring out and conserve their delicate chocolate flavor, while at the same time subduing the harsh and rank flavors.

The by-products of cocoa will be better utilized and may even become main products of great importance.

Undoubtedly a substance or substances will be found which with chocolate will form a "natural combination" such as did milk and chocolate in milk chocolate.

The nature of cocoa beans will undoubtedly be modified as to color and flavor by the adoption of methods of specialized culture and fermentation, and perhaps by the grafting of several cocoa varieties.

Chocolate will certainly find its place in the world of tomorrow.

Bibliography

of Technical Articles on Chocolate appearing in THE MANUFACTURING CONFECTIONER 1921-1941

Examination of Chocolate Liquors. Dr. A. P. Bryant. Nov. 1921

Leakage and Bursting of Chocolate Coated Candies. Dr. A. P. Bryant. Nov. 1922

Varieties, Composition and Commercial Production of Cocoa and Chocolate. Robert Schwarz and M. A. Posen. Nov. 1922

Standardizing and Checking Percentage of Coating. Wm. S. Cloud. April 1923

Use of Chocolate in a Candy Plant. Theodore W. Bunte. June 1924

Some Characteristics of Cocoa Butter. Dr. Walter Roth. Nov. 1925

The Development and Prevention of "Bloom" on Chocolate and Chocolate Work. Robert Whymper and A. Bradley. May 1925

Heat Struck (Chocolate Graying). Robert Randolph. Feb. 1928; Mar. 1928; April 1928

Standardizing Chocolate Coating Batches by the Ligature Method. B. I. Masurovsky. June 1928; July 1928

Use Less Accra. Robert Whymper. Nov. 1928

Chocolate "Au Natural." Robert Whymper. Dec. 1928

Formulas vs. Performance. Ernest Fieux. Jan. 1929

Chocolate-Aroma Elusive. Robert Whymper. April 1929

Chocolate Quality and the Cacao Moth. Robert Whymper. July 1929

Arriving at a Blend. Robert Whymper. Sept. 1929

Prostituting Chocolate Quality for Volume Production. Robert Whymper. Jan. 1930

Illipé Butter as a Cocoa Butter Substitute. Edward Benyon. Jan. 1930

Using Lecithin to Control the Fluidity of Chocolate. A. G. Avent. Feb. 1930

Which is the Best Method of Pressing Cocoa Butter. Edward Benyon. Feb. 1930

After Development of Cocoa Aroma in Chocolate Coating. Robert Whymper. July 1930

Fluidity Control of Chocolate. A. G. Avent. Oct. 1930

If You Aim to Produce the Best Chocolate. Robert Whymper. Jan. 1931

The Importance of Laboratory Control in the Manufacture of Chocolate and Cocoa. C. P. Harris. Feb. 1931

Cacao Products Under the Federal Food and Drug Act. J. W. Sale. Feb. 1931

Chocolate Turned Toward Corn. A. A. Lund. Sept. 1931

The Corn Cure for Chocolate. Whymper. Oct. 1931

Timely Tips for the Buyer of Chocolate Coatings. Henry Banks. Jan. 1932

How to Secure Uniform Color of Coatings—Believe It or Not. Robert Whymper. Jan. 1932

Short Talks on Chocolate. R. Burbank

Storage and Handling. Jan. 1932

Coating and Dipping. Feb. 1932

Causes of Graying. Mar. 1932

Hot Weather Suggestions for Chocolate Coated Candies. April 1932

Using Thermometers. May 1932

Chocolate Production by the Unit System. Robert Whymper. Oct. 1932; Nov. 1932

Something out of Statistics. Robert Whymper. Dec. 1932

Technology Before Technocracy. Whymper. Feb. 1933

Progress in the Technology of Chocolate. Robert Whymper.

Cacao Beans. Mar. 1933

Sugar and Milk. April 1933

Lecithin in Chocolate Coatings and Icing. Wm. A. Cleary. July 1933

SETTER
OF PURE PAPER

Introducing

SETTERSTIX

OF PURE PAPER

The revolutionary new sucker stick you can't afford to miss.

Setterstix are showy, with a clean, sanitary appearance. Snow-white, and look "good enough to eat." No wonder the youngsters have already commenced to call for **"that sucker with the white stick."**

Then, they're **safe.** Setterstix break or bend if children fall on them. Doctors and Nurses recommend them.

And, **strong,** too. Rolled by a patented process, on patented stick-making equipment, they are stiff enough to work easily on standard sucker machines. Absolutely uniform in thickness and length, and give better results than wood.

CHECK THESE FIVE POINTS!

- ✔ 1. **SAFE** — they break if the child falls on them.
- ✔ 2. **SANITARY** — pure paper, fresh from the mill.
- ✔ 3. **SHOWY** — a snow-white, that **stands out.**
- ✔ 4. **SALABLE** — children call for them.
- ✔ 5. **SMOOTH AND STRONG** — fit standard machines.

Better line up with* SETTERSTIX *today. Write* NOW *for samples.

SAFE
SANITARY
SHOWY

SETTER
OF PURE PAPER

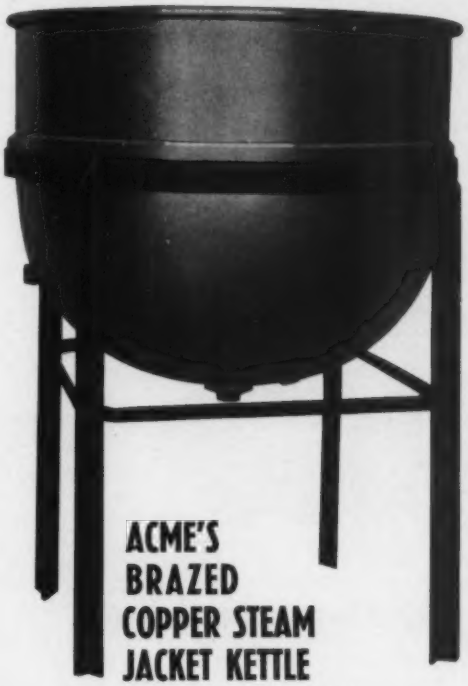
SALABLE
STRONG
Work in Standard Machines

1

SETTER BROTHERS
INCORPORATED
Cattaraugus, New York, U. S. A.

ACME EQUIPMENT

For The Candy Plant



ACME'S BRAZED COPPER STEAM JACKET KETTLE

Developed by Research and Actual Use

Guaranteed superior to riveted and soldered type, because joint is permanent, there's more cooking surface, no rivets or solder to add weight, no costly repairs. High efficiency.

We also manufacture kettles from stainless steel, monel and other alloys. All ACME kettles conform to specifications of Liability Insurance Companies.

Fabricators of:

Cooling Slabs	Revolving Pans
Tilting Kettles	Vacuum Pans
Tanks	Coils

Stationary Mixers for Steam or Open-Fire Work

ACME
COPPERSMITHING CO.

2535 Maypole Ave.
CHICAGO **ILLINOIS**

Lecithin in Candies and Chocolate Coatings. Wm. F. Schlesinger. July 1933
Chocolate Fats. Morgan and A. G. Avent. Dec. 1933
Scientific Control of Grinding in the Chocolate Industry. Harold Morgan and A. G. Avent. Jan. 1934
Moisture Determination in Chocolate. Kathryn E. Langwill. Sept. 1936
The Flavoring of Chocolate. Dr. S. Jordan. Dec. 1936
Summer Coatings. Talbot Clendening. Feb. 1937
New Hope for Chocolate Fat Bloomers. Robert Whymper. May 1937; Sept. 1937
Sanitation and Safety in Chocolate Work. Carey P. McCord, M. D. May 1937
Chocolate—Its Selection and Use. Talbot Clendening. Aug. 1937
Chocolate for Hollow Moulded Goods. K. P. Vetrop. Oct. 1937
Chocolate—The Reconstruction of Candy Formulae. S. Jordan and K. Langwill. Nov. 1937
The Disintegration of Sugar in Chocolate Refining. A. A. Lund. Dec. 1937
Oxidized Cacao Butter as an Acid in Preventing Fat Bloom. Dr. W. Clayton. Dec. 1937
A Microscopic Screening Test for Evaluating Smoothness of Chocolate Coatings. A. A. Lund. Jan. 1938
Purpose of Conching Chocolate. Robert Whymper and C. P. Shillaber. Feb. 1938
Standardizing Particle Fineness of Purchased Coatings. A. A. Lund. Mar. 1938
Fat or Lean Coatings. Robert Whymper. April 1938
Certainly, Use Lean Coatings. Thomas Brown. May 1938
Bloom Control in Chocolate. W. Ktmpf. June 1939
Analysis of Cocoa Powder. K. E. Langwill. Oct. 1939
Coverage of Chocolate Coatings—The Bob Test. Leo Freundlich. Jan. 1940; Feb. 1940

RUM and BUTTER FLAVOR

A Popular Savor for Seasonal Favor

The newest trend—rum and butter flavor—is rapidly "catching on" with many manufacturers who recognize popular demand...

Florasynth's imitation Rum and Butter Flavor No. 8 has unusual subtle appeal. You will find it is definitely a "consumer repeat" flavor...

Prices, Samples and Suggestions furnished upon request.

"Will be seeing you at the F.E.M.A. Convention on June 16, 17 and 18, at the Traymore Hotel in Atlantic City."

Florasynth LABORATORIES, INC.

1533 Olmstead Avenue, New York

CHICAGO DALLAS DENVER LOS ANGELES
NEW ORLEANS SAN FRANCISCO SEATTLE

BOOTH 40

Confectionery Industries Exposition
Palmer House, Chicago, June 2-5

• • •

While you are attending the N.C.A. Convention, "make a date" to visit our plant. You are cordially invited and always welcome. See the finest processing equipment produce before your eyes the finest

- **CHOCOLATE COATINGS**
- **COCOA POWDERS**
- **CHOCOLATE SPECIALTIES**
- **SUMMER COATING**

Warfield Chocolate Division
The Warfield Company
CHICAGO ILLINOIS

MOLASSES—

(*Continued from page 44*)

by the time he extracts the last ounce of sugar from the raw product, he secures a residual, almost black, burnt, bitter product commonly known as blackstrap molasses. While certain types of blackstrap molasses are used in edible products, many types of blackstrap are unfit for human consumption.

I might add that there is not as much molasses flavored candies produced today as was the case 20 years ago, and it is my frank opinion that this is due to the relatively poor flavor of the molasses used.

Factors Affecting Flavor

There are several factors that influence the character of candy flavored with molasses, such as the quality of the molasses, the amount used, and the way the molasses is added to the other materials—all of which are at the mercy of that invisible factor—heat.

If low grade molasses is boiled on the open fire and constantly stirred, certain types will begin to smoke or burn at temperatures between 235 and 245 degrees F. Better grades will not smoke until the temperature is 250-255 degrees F., and the highest grade open kettle molasses can be boiled to 270 degrees F. before it shows signs of scorching. This is the key to the successful use of molasses in candy making.

If the molasses shows signs of smoking during the cooking period, it would be better to cook the other materials to as high a temperature as possible and then add the molasses. This is the best way to add open kettle molasses and lower grades as when making open-fire molasses chips.

When the sugar and corn syrup or invert sugar, plus water, have been cooked to 320 or 330 degrees F., depending upon whether the chips are to be honeycombed or spun solid, the molasses is added in a fine stream and the batch gently stirred.

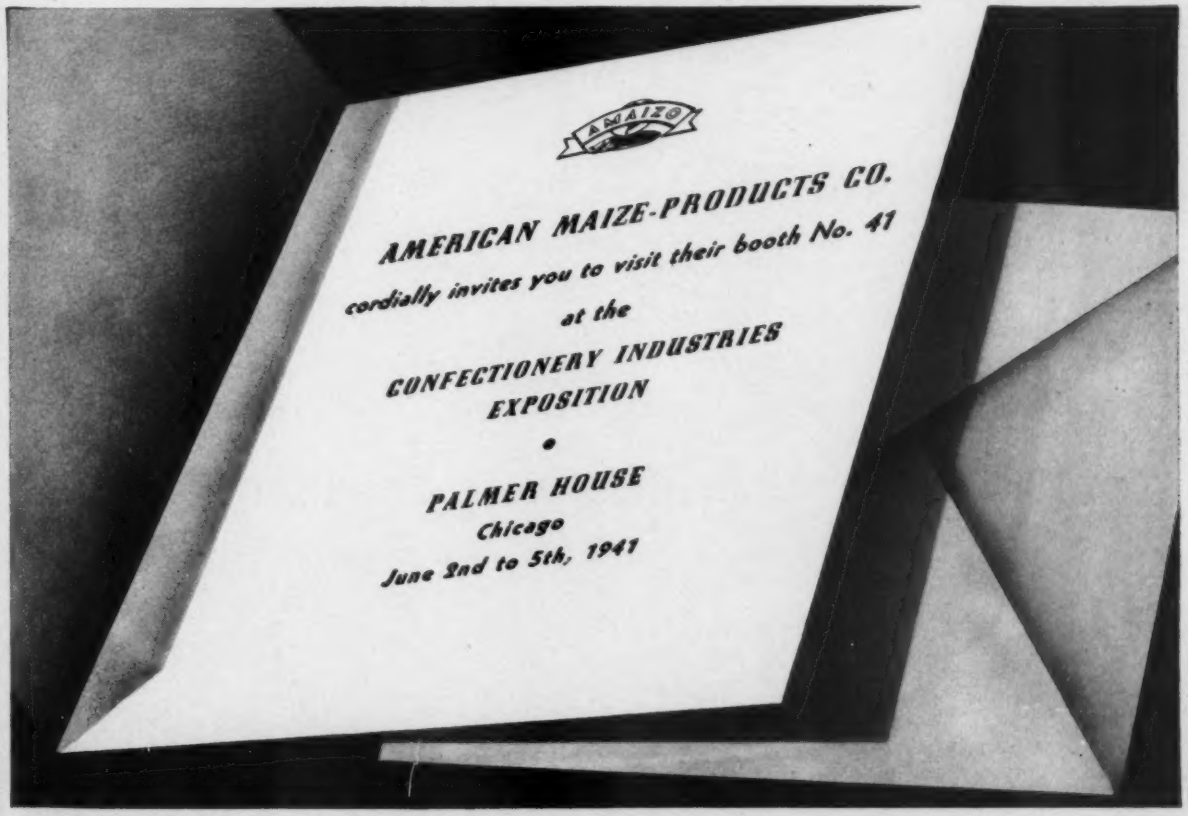
The normal cooking conditions attending the boiling of most candies need not harm the flavor of the molasses, but by altering the manner in which the molasses is incorporated in the batch, an improvement in flavor as well as color may result.

For example, a chewing nougat could be made by boiling sugar, water, corn syrup and molasses to 265-275 degrees F. (sea level), then mixing this cooked batch with the proper amount of a No. 2 or No. 3 frappe.

This method of using the molasses should prove quite satisfactory for chewing nougat, as the invert sugar in the molasses would be helpful in retarding premature crystallization —but, if a grained molasses nougat was desired, it would be advisable, if not necessary, to add the molasses in a different manner.

The maximum amount of molasses flavor can be obtained by adding it to both sections of the batch, namely, the frappe and the boiled syrup portion. If the grade of molasses is such that it would not destroy the foam structure of the Frappe (and the better grades of molasses will not do so), it would be quite feasible to make a special molasses frappe from equal parts of corn syrup and molasses, the corn syrup to be boiled to 250 degrees F. (sea level) and the uncooked molasses added and mixed, after which the batch is beaten with a predetermined amount of albumen solution, as when making standard non-flavored frappe.

Without going too far into this rather controversial subject of flavor and taste, we should mention that the importance of texture and consistency of the candy should receive careful consideration as hard candy and chewing candies, which dissolve slowly in the mouth, may be strongly



What Sells Your Candy?

COLOR attracts customers to your candy . . . brilliancy, lustre, taste appeal . . . all help to sell it. Does your product stack up against competitive candy colorings?

ATLAS CERTIFIED PLASTIC FOOD COLORS impart greater strength and brilliancy to your candies. Besides selling more candies for you over the counter, these cake-form plastic colors bring you new production economies. Self-measuring . . . eliminate guesswork, waste, spotting, dusting . . . have easy solubility. Offered in all necessary colors. Try a few cakes and see the vast improvement. Send in your order today.

90 YEARS OF PROGRESS

first producers of
CERTIFIED COLORS

One square to a 35 lb. batch. Each lb. contains 8 2-oz. Cakes as pictured above. Squares break off easily.

H. KOHNSTAMM & CO., Inc.

89 Park Place, New York, N. Y. 11-13 E. Illinois St., Chicago, Ill.

Atlanta Baltimore Boston Cincinnati Cleveland Dallas Detroit
Los Angeles Minneapolis New Orleans Philadelphia St. Louis

flavored; whereas softer types, such as rolled and cast cream centers and marshmallows, should be mildly flavored.

The higher grades of molasses which contain smaller amounts of ash and gums, work best in candies of soft consistency; whereas the stronger grades are more generally used in low priced hard candies.

The addition of molasses to vacuum cooked hard candies is not quite as simple a problem as when adding molasses to open fire cooked hard candies. Nevertheless, this may be done by mixing warm molasses with dairy butter or coconut oil and placing it into a funnel attached to the air intake valve or petcock used to break the vacuum.

This suggestion applies to candies processed in the old style closed vacuum pan and the more modern type vacuum pan with removable dome. Several times during the vacuum cooking of the hard candy, the air intake valve is opened which will permit a charge of the molasses-oil combination to enter the batch, and the foaming usually associated with the addition of molasses to high cooked batches will be materially checked due to the presence of the butter or oil in the molasses.

There is still another way to add molasses to vacuum cooked and open fire processed hard candy, including continuous cooker work, either with or without vacuum. A quantity of medium or high grade molasses, plus a little fat and corn syrup, are cooked on the open fire or in a closed or removable dome vacuum pan to as concentrated a mass as can be accomplished without burning the molasses. The batch is cooled at once and portions of the concentrated hard taffy-like molasses are mixed into the hot candy batch on the cooling slab. It is the practice to make quantities of the concentrated molasses flavor which is kept in covered containers for use when needed.

However, regardless of how molasses may be added to any kind of candy, the flavor will be no better than the quality of molasses used. And, strange as it may seem, the same breed of torula wild yeasts, which causes fermentation in cream centers, has been used for generations to develop the inimitable flavor of high grade molasses.

Lecithin Now Accepted As Candy Ingredient

Lecithin is now so widely used in the chocolate and confectionery industry that many people may not realize that lecithin has been known commercially in the United States only since 1928. Prior to that time the entire annual consumption did not exceed a few hundred pounds, derived from eggs or animal tissues at costs of from $5.00 to $20.00 per pound and used in medicinal products or for laboratory work.

In the latter part of 1928 soybean

lecithin was introduced from Europe, a product obtained by solvent extraction and comprising the lecithin and associated phosphatides with a carrier of 30-35% soybeal oil.

Mention should be made of J. W. Conway who brought commercial soybean lecithin to the American market and of American Lecithin Corp. and Ross & Rowe, Inc. who experimented and pioneered to place lecithin at the disposal of potential users.

Research in this country soon led to the discovery of new uses and improvements in quality. The colloidal properties of lecithin were applied to chocolate with astonishing results and chocolate technology took an important step forward. Chocolate manufacturers almost unanimously objected to the presence of 30-35% of soybean oil, a low melting point oil foreign to chocolate and having a characteristic taste. To meet the views of these manufacturers and to provide a more suitable form of lecithin for use in chocolate, a highly purified grade was developed in which the soybean oil, removed by solvent extraction, was replaced by a carrier of 20-25% pure pressed cocoa butter. It is apparent from this that merely taking soybean lecithin containing a carrier of soybean oil and adding cocoa butter does not give "Cocoabutter Lecithin," but only a mixture or dilution of ordinary soybean oil lecithin with cocoa butter.

About the same time methods of bleaching with peroxides were evolved and not only was marked reduction in red and yellow coloration effected, but in some cases the consistency and emulsifying properties were simultaneously improved. The original problem of oil separation had been solved mechanically by more efficient processing. The bleached grades were preferred for addition to shortenings, hard butters, etc., and in various operations such as the treatment of textiles.

The candy industry found lecithin to be an extremely useful ingredient in confections containing oils and fats, especially where added as such. By a powerful dispersing or emulsifying action the lecithin causes the fats to spread uniformly throughout the batch and to stay put. In another application the lecithin blended with oil soluble flavors serves to intensify flavor strength and reduce loss due to volatilization.

In nearly every instance experience has shown that a small fraction of a percent of lecithin is sufficient to produce optimum results. In chocolate the quantity used rarely exceeds 0.3% and in confectionery 1% based on the weight of the fat content. With few exceptions this corresponds to the fact that lecithin occurs throughout nature in all forms of animal and vegetable life in relatively small percentages.

Recent scientific and clinical work has emphasized the importance of lecithin nutritionally. Besides the phosphorus in organic combination lecithin also contains a valuable nitrogen group known as choline which appears to be an essential dietary factor. There is evidence indicating that lecithin in significant amounts improves absorption of fats and possibly of vitamins.

Much research work on lecithin is constantly in progress, especially since 1935, when extraction of lecithin from soybeans in this country was begun on a large scale. Today no lecithin is imported and the large acreage of soybeans plus expanded production facilities assures an ample supply of high quality product to meet the requirements of the chocolate and confectionery and other industries.

ASK OUR JOBBERS FOR SAMPLES

DODGE & OLCOTT COMPANY • **FRITZSCHE BROTHERS, INC.**
180 Varick Street, New York, N. Y. 76 Ninth Avenue, New York, N. Y.

Distributors for: CALIFORNIA FRUIT GROWERS EXCHANGE • Products Department, Ontario, California
Producing Plant: The Exchange Orange Products Company, Ontario, California

Copyright, 1940, California Fruit Growers Exchange, Products Dept.

FIRST CLUE TO FLAVOR *IS COLOR*

Only color can seize the hurried shopper's eye and invite him to try how really good your candy tastes. Exactly the right color makes the sale. Exactly the right color — uniformly repeated — makes a steady customer.

National, pioneer domestic producer of U.S. Government Certified Food Colors, makes the most complete line of Primary Colors and Blends. With its 35 years experience in helping food manufacturers meet every requirement of shade, strength and uniformity, National Certified Food Colors merit your careful consideration.

We invite you to use National Technical Service for color matches, formulas or other helpful data.

Certified Food Color Division

NATIONAL ANILINE & CHEMICAL CO., INC.

40 Rector Street • • New York, New York

BOSTON PHILADELPHIA GREENSBORO CHATTANOOGA
PROVIDENCE SAN FRANCISCO ATLANTA PORTLAND, ORE.
CHICAGO CHARLOTTE NEW ORLEANS TORONTO

TAX FIGHT

(Continued from page 27)

Brock Candy Co., Chattanooga, Tenn., and N.C.A. President Phil Gott. W. J. Lavery, Curtiss Candy Co., Chicago, and R. L. Singer, New England Confectionery Co., spent several days prior to the hearing in collecting information which would support arguments in the prepared statement.

The A.R.C. committee chosen to represent the association in tax matters consisted of George LaSauvage, of Frank G. Shattuck Co., New York; Chas. Welch, Jr., Sanders, Inc., Detroit; and William D. Blatner, secretary and treasurer of the A.R.C. Mr. LeSauvage and Mr. Welch were not present at the hearing on account of illness, but Mr. Blatner cooperated with the committee from the N.C.A.

CONFECTIONERY BROKERS

DONALD A. IKELER
2029 E. Main Street
KALAMAZOO, MICH.
Territory: Michigan

H. L. BLACKWELL COMPANY
P. O. Box 3040 — Sta. "A"
EL PASO, TEXAS
Territory: Texas, New Mexico and Arizona

MALCOLM S. CLARK CO.
332 VIRGINIA AVE., SAN FRANCISCO, CAL.
923 E. 3RD ST., LOS ANGELES, CAL.
1238 N.W. GLISAN ST., PORTLAND, ORE.
Territory: Calif., Ore., Wash., Ariz., W. Nev., N. Idaho & Hawaiian Islands

COFFEE FLAVORING ALWAYS FRESH

Here, at last, is a pure coffee—BARRINGTON HALL Instantly Soluble COFFEE—adaptable for flavoring any products where pure coffee flavor is desired. The undesirable elements that stale coffee, which in turn, stale the products they enter into, have been removed. Write for full particulars.

BAKER IMPORTING CO.

NEW YORK 132 FRONT STREET
CHICAGO 2326 S. MICHIGAN AVE.
MINNEAPOLIS 212 N. SECOND ST.

BARRINGTON HALL
QUALITY *Coffee*
100% pure

Exposition to Feature Production and Merchandising Aids To Candy Men

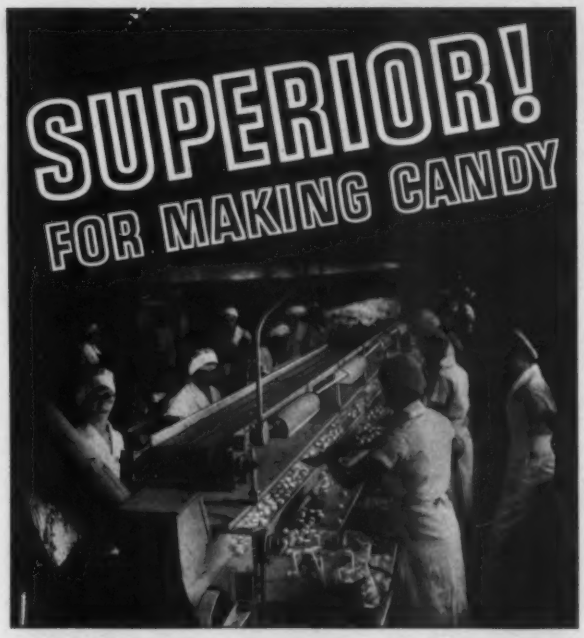
Vital new techniques in production and merchandising will highlight the 18th annual Confectionery Industries Exposition, to be held concurrently with the 58th annual convention of the National Confectioners' Association, at the Palmer House, Chicago, June 2 to 5, inclusive, it is stated by the association.

"The forthcoming exposition," it was announced by the exposition management, "will be of outstanding value to manufacturing confectioners. The largest exposition in the industry's history, it will present the greatest array of new equipment, machinery, supplies and services ever before shown to candy manufacturers at one time and in one place.

"More than ever before the manufacturing confectioner who is alert to the significance of new techniques, new equipment and new ideas will find the exposition invaluable to the betterment of his own business, pointing the way to reduction of the unit costs of production, superior quality and more efficient sales.

"In number of exhibitors, too, the exposition will set a new high, thus providing for the candy man a broader opportunity for comparing the merits of competitive products. Demand for exhibit space has been so great that the exposition management, in order to make possible the widest representation of suppliers, made provision for dividing into smaller units the few booths remaining unleased, and these new units, according to a recent tabulation, were immediately in great demand. Supply companies to the confectionery industry who are interested in leasing any of these booths are advised to communicate with the Exposition Management, 232 Madison Avenue, New York, N. Y.

"On all counts, the forthcoming Confectionery Industries Exposition—together with the concurrent convention—promises to reach new highs in usefulness for the manufacturing confectioner."—Adv.



Sensational New Sweetening Agent

SWEETOSE

(Reg. U. S. Pat. Off.)

twice as sweet... three times as fluid as ordinary corn syrup!

THE most important ingredient that goes into candy—your sweetening agent—now in a new, *improved* form! Yes "SWEETOSE" is sweet enough to replace all corn syrup and all or part of the sugars in your formulas—is far different in physical characteristics and in food value from anything yet developed in this industry! For this brand-new corn syrup is *highly fluid* and *unusually rich* in energy sugars—features which greatly facilitate the handling and manufacturing of your confections—and which give you better products at lower cost!

6 WAYS YOU GAIN WHEN YOU USE "SWEETOSE"

1. Cooks EXTRA *fast!*
2. Handles EXTRA *easy!*
3. Candy tastes EXTRA *good!*
4. EXTRA *smooth texture!*
5. Gives EXTRA *shelf-life!*
6. Assures EXTRA *profits!*

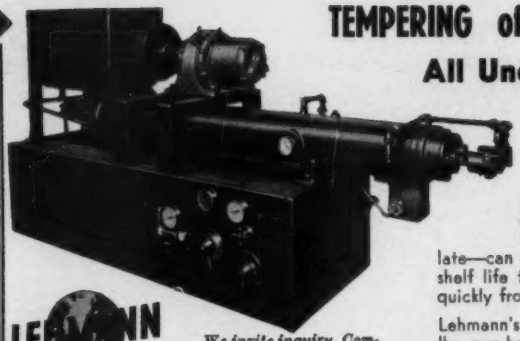
You are cordially invited to visit the STALEY booth at the CONFECTIONERY INDUSTRIES EXPOSITION at the Palmer House in Chicago. Our booth is No. 42. Look Us Up!

THESE EXTRAS ARE YOURS WHEN YOU USE "SWEETOSE"

developed by the

A. E. STALEY MFG. CO.

DECATUR, ILLINOIS



TEMPERING of CHOCOLATE — POSITIVE and AUTOMATIC

All Uncertainty Removed . . . .

That is the function of the newly developed

LEHMANN THERMAL EQUALIZER

It tempers chocolate up or down to a desired degree—tempers chocolate gradually without detriment to viscosity—equalizes a given temperature throughout the mass—gives positive supply of properly tempered chocolate—can easily be added to any moulding or enrober unit—gives gloss and added shelf life to finished goods—saves scrap, labor and floor space—can be changed quickly from milk to plain chocolate.

Lehmann's THERMAL EQUALIZERS have capacities ranging from 500 to 4,000 lbs. per hour. Their size permits installation at any point where tempered chocolate is required.

LEHMANN

We invite inquiry. Complete details will be sent upon request.

The Standard for Quality in Machinery Since 1834

J. M. LEHMANN COMPANY, Inc. 250 WEST BROADWAY, NEW YORK, N. Y. FACTORY: LYNDHURST, N. J.

FLAVORS ESSENTIAL OILS

P. R. DREYER INC.

119 WEST 19th ST.

NEW YORK, N.Y.

- TRUE FRUIT EXTRACTS
- FORTIFIED TRUE FRUIT
- IMITATION FLAVORS

A COMPLETE LINE

OF FLAVORS FOR EVERY CANDY USE

"Drop in and see us while you're attending the

CONFECTION INDUSTRIES ★ EXPOSITION ★

AT THE PALMER HOUSE—CHICAGO

JUNE 2ND TO 5TH

BOOTH 44

Win a prize in our big "GUESSING CONTEST"!

SWIFT'S BROOKFIELD DRIED EGG WHITES

"The egg whites that give candy better body and better flavor. Be sure to see our special demonstration at the Exposition."

FLAVORS—

(*Continued from page* 38)

sults, and new developments in all lines are in the making.

Better flavors are being produced each year and remarkable advancement in this field can be expected during the next few years.

We have in mind the use of high boiling aromatics in flavors which are directly applicable to the flavoring of candies subject to modern processes.

Prejudice Against Emulsions Gradually Passing

The prejudice against the use of emulsion flavors in candies will, no doubt, pass away in time and a greater number of manufacturers will see the advantages of using this means of introducing flavor into their products.

Very few realize that they are paying from three to five dollars tax for every gallon of flavor which they use, merely for convenience in introducing flavor into their product.

An emulsion in which water instead of tax-paid alcohol is the suspending medium, saves this difference. The flavor value of each product would be the same, if the flavor content were the same, although the odor value of the alcoholic extract would be greater, especially at the time the flavor is added to the hot candy mass. This has reacted against emulsion flavors and in favor of the alcoholic solutions in the past.

As a matter of fact, the older types of flavors in emulsion form did not lend themselves so well to processing and were difficult to stabilize, but the more modern flavor will be decidedly more applicable to this process.

The advantages of using flavor in emulsion form are many, and this method of using flavor in candies will become more prevalent in time, as more is known of the emulsification of flavors, and suitable products are introduced.

A great many manufacturers of sweets are not aware of the value of flavor in their products, or else they are indifferent. Looking at the matter from the standpoint of a consumer, we have in mind two pieces, both of which are identical as far as ingredients are concerned. Both have the same color, texture and general qualities, one retails for 20 cents a pound, the other for 80 cents. The expensive product contains more and better flavor. The additional flavor adds very little to the cost of the candy but enables the manufacturer to sell his product for a great deal more.

We know that the volume enjoyed by the manufacturer of the less expensive piece is much greater, but he

could certainly add to this volume by increasing the quality and quantity of the flavor in his product.

We know of another manufacturer, whose volume of business is the envy of the trade, who specializes in the less expensive types of candy. He uses the best flavors, and plenty of them, and realizes that flavor is one of the most important ingredients in his product.

Among the larger manufacturers there are several who will not use those flavors marked "imitation." To my way of thinking, this is the wrong attitude. As near as we have been able to ascertain, this prejudice dates back to the time when all artificial flavors were "etherial" in composition and certainly had little resemblance to the fruits after which they were named. This policy has persisted through the years, and other manufacturers who were acquainted with the more modern imitation fruit flavors, have made great inroads into this profitable class of merchandise.

No manufacturer can afford the expensive luxury of specializing in only one type of flavor when the matter may be corrected by a simple statement on the label of his product.

There are fruit flavors on the market at this time, for use in certain types of candy, which do not acquire the word "imitation" on the label of products in which they are used.

Bibliography
of Technical Articles on Flavor appearing in
THE MANUFACTURING CONFECTIONER, 1921-1941

Food Flavors—Source, Composition and Adulteration. J. W. Sale and W. W. Skinner. May 1922; Aug. 1922; Dec. 1922

Action of Sugar with Other Materials—Flavor. Frederick W. Murphy. June 1922

Flavoring Extracts. M. A. Posen. July 1922

Flavoring Materials in Candy. Dr. A. Vail Fuller. Oct. 1922

Recently Developed Analytical Methods of Raw Materials. Norman W. Kempf. June 1926

Vanilla and Vanillin. A. A. Lund

From Montezuma to the Modern Confection Factory. Sept. 1926

From Vine to the Curing Station. Oct. 1926

Methods of Curing Vanilla. Nov. 1926

Grading and Packing Vanilla. Dec. 1926

Pointers on Purchase of Vanilla Beans. May 1927

Who Gets Lot X. Jan. 1928

Vanilla and Vanillins. Oct. 1928

Flavor-Blending. Russell B. Stoddard. Aug. 1928; Oct. 1928

Use of Flavoring in Confectionery. John H. Montgomery. July 1933

Flavors in the Art of Candy Making. George A. Eddington. April 1934

The Production Man Speaks on Flavors. Otto Windt. Feb. 1935

Essential Oils and Candy Flavors. Feb. 1935

The Use of True and Synthetic Flavors in Candy Making. N. I. Gage. Feb. 1936; Mar. 1936; Nov. 1936

Flavor Emulsions in Candy. Claude Johnstone. April 1939

Flavor in Confectionery. Talbot Clendenning

The Physiological Aspects. Jan. 1940

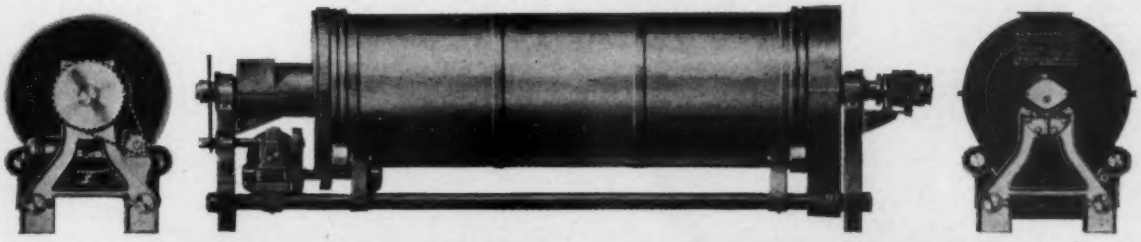
Methods of Evaluation. Feb. 1940

Taste-Provoking Agents. Mar. 1940

Learning What the Public Likes. April 1940

Vanilla Flavors. May 1930

MOISTURE CONTROL IN MOULDING STARCH



STARCH CLEANERS and STARCH DRIERS

The BULLERJAHN Starch Conditioner is guaranteed to deliver Moulding Starch conditioned to any specification of moisture content and temperature which may be required in the candy factory. It is guaranteed to keep pace with the Mogul at all operating speeds. It will perform continuously without clogging, throughout the production day.

The BULLERJAHN "All Steel" Centrifugal Starch Cleaner, recently introduced to the candy trade, is guaranteed to keep pace with the BULLERJAHN Starch Conditioner.

WRITE US FOR LITERATURE and LIST OF SATISFIED USERS

A. D. BULLERJAHN & COMPANY

MILWAUKEE 704 East Pleasant Street WISCONSIN

PECANS—

(*Continued from page 48*)

pecans. They are a smaller pecan and the shell is considerably harder, but the flavor in general is better than the improved or papershell variety. Most of the improved or papershell variety are sold in the shell. Those which are shelled are used in the main for salting purposes. For this reason in this discussion we will consider the wild or seeding type of pecan.

Raw or Cooked, Pecans Have Good Palatability

The pecan has been aptly called the King of all nuts so far as the Confectionery Industry is concerned. Manufacturers have found that the addition of pecans to their various pieces of candy has increased their sales. They have found that the pecan has aided them considerably in the development and merchandising of new pieces of candy. They have found that the pecan is more or less unique in that in its raw state it has a delightful flavor that is palatable and appetizing, but at the same time when properly cooked and combined with other ingredients in confectionery items. pecans are even better.

The American almond has been brought into prominence for confectionery and other use in food industries by the trend in world affairs over the past five years. However, the developments of the American almond as a product of equal quality with that of its imported relatives is a story of the development of one of California's more important agricultural products. Hence, we are withholding the article on Almonds until a later issue so that full justice may be done and the story told in its entirety. Look for this article in July.

The adaptability of the pecan to the Confectionery Industry has been enhanced considerably by the scientific progress made in processing pecans. Where formerly it was possible to buy one or two grades of pecan pieces, and possibly one or two grades of pecan halves, today it is possible to buy as many as 17 different grades of shelled pecans. In other words, the pecan industry has attempted to so process pecans that they can offer to confectionery manufacturers any grades, or any size of pecan halves or pecan pieces that the particular manufacturer may require for a specific operation. And they have done this at a considerable saving to the candy manufacturers.

Pecan pieces for example, can be bought in sizes ranging in count per pound from 1100 to the pound, up to about 125,000 pieces to the pound. Pecan halves can be bought in sizes ranging in count per pound from about 175 to the pound, up to about 1200 to the pound. This, of course, makes it much more economical for the manufacturer in handling pecans. It eliminates a lot of the sorting, grading and picking that in previous years had to be done, and represented an additional cost.

While doing all of this, the pecan industry has consistently improved the quality of shelled pecans. They have found ways and means of giving the trade a cleaner product, a product with less siftings and foreign material, and a product wherein moisture content is scientifically controlled. Shelled pecans today are delivered to the trade after they have been treated with special gasses that

CITRIC ACID
TARTARIC ACID
CREAM OF TARTAR
SODIUM CITRATE

PFIZER QUALITY
EST. 1849

Manufacturing Chemists
CHAS. PFIZER & CO., INC.
81 MAIDEN LANE, NEW YORK, N. Y.
444 W. GRAND AVE., CHICAGO, ILL.

CITRIC ACID
TARTARIC ACID
CREAM OF TARTAR
SODIUM CITRATE

You Are Cordially Invited to Visit
OUR BOOTH No. 32 AT THE
NATIONAL CONFECTIONERS ASSOCIATION CONVENTION
JUNE 2ND THRU JUNE 5TH
AT THE PALMER HOUSE, CHICAGO, ILLINOIS
A full line of Confectioners' Starches, Quality Corn Syrups, and Cerelose (pure Dextrose Sugar will be on display.
CORN PRODUCTS SALES COMPANY
17 Battery Place
New York City

kill all insect life and their eggs, and in addition, enhances the keeping qualities of the pecans. This advancement and improvement in the pecan industry combined with increased volume has made it possible to offer pecans on a more reasonable price basis.

Pecans Rich in Vitamin Content

Is it any wonder that consumer surveys in addition to trade surveys, indicate a wide margin of preference for pecans to any other nut? As one candy manufacturer said "When I want to improve a piece of candy, I add pecans."

Much has already been written, and more will undoubtedly be written on the subject of Vitamins in confectionery. Everyone is familiar with the very important developments that have been taking place in the Baking Industry under the direction of the National Research Counsel, regarding the enrichment with Vitamins of flour, yeast, etc. Pecans are a good natural source of Vitamin A and Vitamin B_1. The addition of pecans to candy items gives the consumer a natural supply of vitamins.

Charts Show Progress in Brazil Nut Processing

by T. R. SCHOONMAKER*

It is estimated that candy manufacturers take between 65% and 75% of all the shelled Brazil nuts that come into the country. That means the candy industry is paying close to $2,000,000 a year for this one ingredient. The accompanying charts show that the Brazil nut trade in turn is making larger supplies available at a lower price level than was the case a decade ago. These charts tell interesting stories.

Take the price chart. This shows one general price level during the decade of the twenties; another general level from 1932-1940 with a short transition period. While the depression might be partly responsible for this price history, there were other interesting factors at work. To be sure, there are always price fluctuations from year to year caused by different sized crops, changing supplies and prices of competing nuts, as well as changed general business conditions. This possibility of a violent price fluctuation shows up in the year 1921. There had been a very short crop in 1920, and in the early months of 1921 prices reached as high as 87c before new crop nuts began to come on the market.

Since 1931 there has been no commercial shelling of Brazil nuts in this country. All shelled Brazils have been imported already and practically all of them have been shelled in Brazil. Prior to 1930 there was extensive commercial shelling of Brazils in this country and also extensive imports of shelled Brazils from England. The

**Executive Secretary, Brazil Nut Advertising Association, New York.*

THE STANDARD
SPEAS
CONFECTO-JEL
A Complete Pectin Product for Making Jellied Candies
READY to Use
NOTHING to Add
SPEAS MFG. CO. KANSAS CITY MO

KEEP SANITARY STANDARDS HIGH EASILY, AT LOW COST

PLANT cleanliness that more than meets strict sanitary regulations! That's what dependable Oakite cleaning and germicidal materials are giving many confectionery plants. What is your sanitation problem? Removing sticky, tacky deposits from kettles, mixers, trays, pans? Keeping equipment free from contaminating bacteria? Washing floors? Whatever it is, tell us. Write for factual, money-saving data based on our 31 years' experience.

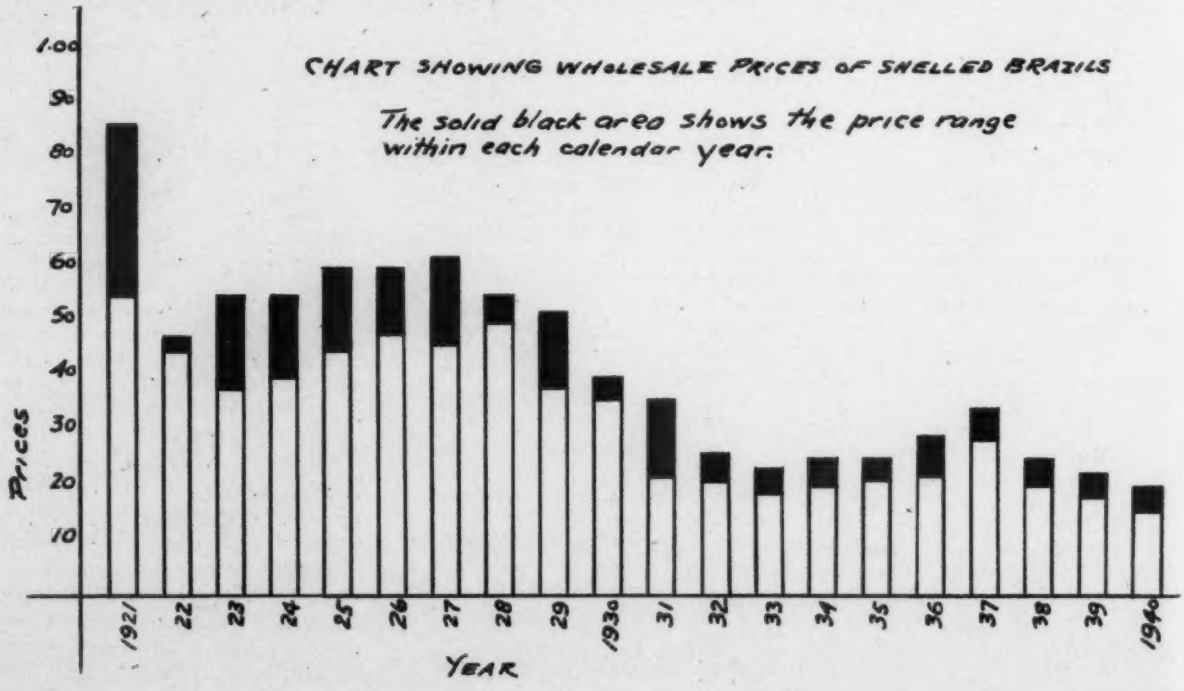
OAKITE PRODUCTS, INC., 36 C Thames St., New York, N. Y.
Representatives in All Principal Cities of the U.S. and Canada

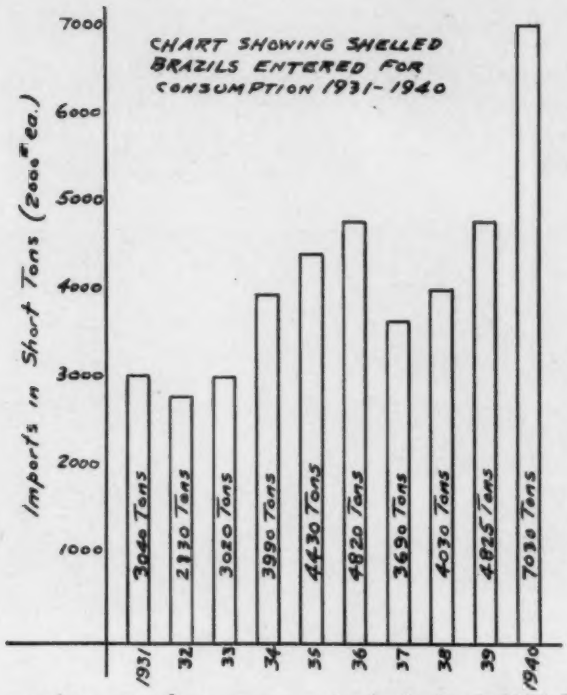
OAKITE Certified CLEANING

Wine FLAVORING MATERIALS
High-Score BUTTER-SCOTCH FLAVOR
French's Jang VANILLA FLAVOR At Its Best
CARAMEL-NUT-BUTTER FLAVOR
Rum-Butterscotch Flavor
Ferbo BUTTER-CREAM
Ferbo PRODUCES THE EXACT TASTE AND AROMA OF 92 Score Butter
Ferbo Co.

vagaries of our tariff were such that it was possible to ship Brazils in the shell to England, shell them there and ship them to the U. S. and compete with nuts shelled here. However, the Hawley-Smoot Bill in 1930, combined with the development of the shelling industry on the Amazon, have changed that picture entirely.

The chart showing imports is prepared from Department of Commerce statistics of imports entered for consumption, which means nuts on which import duties have actually been paid and consequently withdrawn from





bond. In any given year, figures on actual arrivals might and frequently do differ very materially from the figures shown here.

The imports show a definite upswing beginning in 1934. This might have occurred in any event. Nevertheless, it is significant that the beginning of the upswing coincided with the organization of the Brazil Nut Association which was formed by the Brazil nut importers in the U. S. The advertising campaign that was started then and has continued ever since has done much to make Brazil nuts more generally known and to increase popularity, both of the nut itself and products containing Brazils—most specifically Brazil nut candy.

As evidence of the results of this campaign, take the year 1940, when figures for Brizal nut arrivals and nuts entered for consumption topped all previous records by wide margins. This was probably a freakish year due to a combination of conditions we are not likely to have again. Nevertheless, the import figures for nuts entered for corsumption equals the figure for arrivals, indicating that all arrivals moved right out into trade channels and into consumption. Also, in spite of these abnormal arrivals, there was a very substantial price advance during the closing months of the year.

Brazil nuts are apparently strongly established in popular esteem, and the general popularity of the nut itself is an added asset to the candy manufacturers in merchandising a varied line of Brazil nut confections.

Our Latch String is Out

AT THE CONFECTIONERY INDUSTRIES EXPOSITION

Our Booth is space 50 at the Exposition

Visitors at the Confectioners Exposition are extended a cordial invitation to visit our booth for discussion of problems associated with the use of corn syrup in candy making. Competent people will be in charge to answer your questions, and charts will demonstrate some very practical points in the use of corn syrup in the candy batch. Our exhibit will deal, also, with corn syrup as a food—a subject of particular importance at this time.

Union Sales Corp., Distributors for:

UNION STARCH & REFINING CO., COLUMBUS, INDIANA

now PERFECT wraps of uniform size for IRREGULAR or REGULAR shaped bars

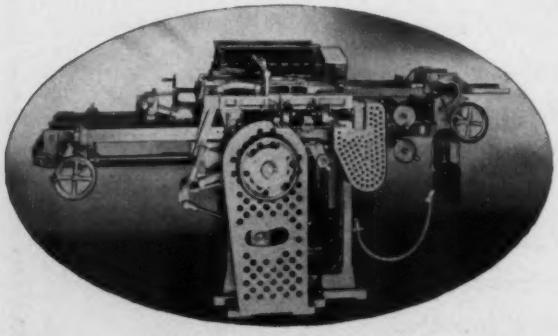
See this NEW, Quickly Adjustable Bar Wrapper

AT THE

CONVENTION
BOOTHS 10 & 11

At Booths 10 and 11, you'll see the closest thing to bar wrapping perfection yet designed — our new *quickly-adjustable* Model DF (in action). The DF can take any bar — regular or irregular — and turn out a flawless wrap. Regardless of the texture or shape of the bar, the package is *always of uniform size,* and *perfectly formed* — because all forming and end folding of the wrapping material is done over breaker bars and tuckers. In addition, a new "tuck in" fold makes a wrap that is ideal for vending machines. The *end fold* is tucked under the bar or card and firmly held by the sealed seam at bottom of the package — no loose ends to cause vending machine *jams.*

The DF is extremely VERSATILE—wraps a wide range of sizes in any type of wrapping material. An inner liner can also be applied without interfering with the gluing of the outer wrapper. Has Electric Eye for registration of printed wrappers. Speed, up to 115 bars per minute.



Also on view at the Convention

Model FA, wrapping Whitman's Fairhill Chocolates in printed "Cellophane"

The versatile FA also wraps open boats, turned-up-side trays and ordinary cartons in any wrapping material desired . . . and the change-over from one size package to another is taken care of quicker than you can say "Jack Robinson."

Literature on request

PACKAGE MACHINERY COMPANY, Springfield, Mass.
NEW YORK CHICAGO CLEVELAND LOS ANGELES TORONTO

Mexico, D. F.: Agencia Comercial Anahuac, Apartado 2303
Buenos Aires, Argentina: David H. Orton, Maipu 231
Peterborough, England: Baker Perkins, Ltd.
Melbourne, Australia: Baker Perkins, Pty., Ltd.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Choice of a good box cover paper combined with rich looking and delicious candy, carefully packed, makes this an outstanding Candy Package by every standard of measurement.

Candy Packaging---

Eye-appeal and protection for consumers

by F. W. BRINKMAN*

Candy packaging has come a long way in 20 years, but much remains to be done.

No people on earth is as demanding as the American public in the matter of quality and appearance of consumer goods. We have become extremely conscious, over the years, of the intrinsic quality of things we eat, wear or possess merely for esthetic reasons; but more than that, we demand that the exterior wrap of these things give the ultimate in "dress-up" and protective value. This is probably a direct result of the merchandising methods introduced and developed by the automobile industry with its yearly new models, its new gadgets, its chromium plating, its white-wall tires, and all other things that make a car desirable in the buyers' eyes. But following upon the impetus thus given by the car industry, hardly a single item of consumer goods has escaped re-vamping, re-shaping, re-dressing, and modernization to bring it into line with present-day merchandising conceptions. And candy is no exception.

Most of us can remember when candy in a package—any kind of a package was a rarity. True enough, the old barrel and pail properly classify as "package," but in the light of present-day packaging philosophy these old-time containers did little to help sell our goods. They were used entirely as convenient carriers for shipping purposes; little else. Not even the idea of protection against contamination was involved in the use of the wooden unit; it was entirely a matter of using some container that would hold a definite amount of candy and would keep it in one unit until it arrived at its destination. In the old days no one ever admitted that there ever was danger from contamination. If the candies became stuck together as a result of unfortunate storage or unpredictable weather conditions, the consignee did not often ship it back. He went after it with a hammer or chisel, salvaged as much as he could, and gave the rest away to the youngsters who came into his store. The barrel or box was a convenient container to keep the candy in, and was never used to influence the sale in any way.

Bulk Chocolate First To be Packaged

Bulk chocolates were the first to break away from pails to cardboard or paper boxes, or caddies. Here again, it wasn't the idea of helping the sale which dictated this change, but rather, the idea of quicker turn-

* *Sales-service division, Independent Grocers Alliance Distributing Co., Chicago, Ill.*

over for the store which had been enabled, through the introduction of this smaller shipping unit, to order out smaller amounts at one time. The package in this case still rarely left the retail store when candy was purchased. the candy being measured out from the box and handed to the customer in a plain paper sack. Bulk chocolates still remained bulk chocolates, for all of their having been taken from a 25-lb. pail and put into a 5 lb. box. Pan work, cream mixes, and similar types of candies followed from barrels to pails, and hard goods from kegs to pails or caddies. But no one made the changes in order to convey the advantages of a package over to the customer. In the early '20s, the customer still "took it and liked it" so far as candy was concerned.

Chocolates, having made the first big break away from the wooden pail to the paper box, also broke the way for smaller units of one, two, three and five pounds. And here for the first time the customer got a break. He was permitted to carry these smaller boxes, filled with candy at the factory, along home with him. You can imagine the pride of the first storekeeper to sell one of these packages! Can't you just hear him say, "Sure, you get the box; no extra charge!" And you can imagine the amazement of that first customer who actually received a box, poor as it was, with his purchase of candy!

This change from the 5 lb. utility box to the smaller "fancy" box definitely took candy out of the category of coffee, dried prunes, pickles in barrels, and other staples, and put it where it properly belonged, in the gift classification. From there it was but a step to the so-called "pick-up" packages, for the consumer appeal of the

F. W. BRINKMAN

carry-out box was instantaneous and most successful from a merchandising standpoint. Someone should erect a monument to the first candy manufacturer who put up a carry-out package of candy. He taught the rest of his competitors plenty.

Like a good many evolutionary changes, it is unlikely that the producing industry or the consuming public were fully aware of the tremendous influence this change-over from bulk to package would have upon all candy making and selling thereafter. Industry has a way of making these changes without much fanfare, and the public has

Competing with every conceivable type of food in today's Self-Service and Super-Market Stores. Candy needs more than a mere protective cover. It must be wrapped in a cloak that will be eye-striking and sales-compelling.

a way of accepting such changes without giving too much thought to the influences which brought them about or the effects they would produce. Nevertheless, the first packaged assortment to leave the retail store marked the end of one era and the beginning of another in all candy manufacturing and selling. In the years since that time, candy manufacturers have been changed from mere producers of sweets to experts in many lines including not only the production of candy and the problems concomitant thereto, but also merchandising, design, store operation and management, time and motion study, and the multitude of other things which influence the production and sale of candy in today's market. We have become better business men for it, as an industry.

Gift Packaged Opened The Way for Whole Field

With the arrival of the "gift package" for chocolates and other mixed assortments, came also the whole field of packaging materials for the interior and exterior of the boxes; design, both of the exteriors of the containers as well as the pack itself; of training packers; of a dozen and one other things which have to be considered today by the candy manufacturer when he plans a new assortment. The first boxes for candy packaging were pretty crude. Yet we have not come such a long way, even today, in the essential materials required. To be sure, our ideas of what the exterior of the box should look like have progressed with the development of package design technique. In spite of the progress in this respect, however, we still have too many boxes of candy which indicate an utter lack of appreciation for the true purpose of the box in today's merchandising scheme. Good candy will always sell, of course. But good candy in the right box will sell better. By the same token, poor candy in a sales-compelling box will sell—the first time—but even the best box in the world will not produce the repeat volume which any asortment must have to be called successful.

In the past 20 years the candy box has really blossomed out as a "gift box." To classify as a gift box today, the container must give that "dressed up" appearance. And that doesn't mean it should be gaudy. Its choice must be based upon the same considerations that influence the selection of any other gift. Thus, selection of a candy box cannot be made on a hit-or-miss basis, or upon a cost consideration entirely. Finding the proper color scheme and illustration is the major premise in gift box determination. And certainly, there is no dearth of good boxes, box papers, or designs and illustrations today. Some of the best design and illustrative artists in the country are producing ideas for candy container use. More recently, the development of color photography has opened a much wider selection of illustrative and decorative material for the candy producer desiring an outstanding container. Lithography and printing on a wide range of packaging materials also has developed new supply sources for candy packages. In the main the candy box exteriors today must have quick eye appeal, and that means, striking color and design and definite beauty. And this eye appeal must be as universal as possible in its influence on various consumer classes.

"Box findings", while not much changed from originals in fundamental characteristics, have become more flexible in recent years, it would seem. All kinds of experiments have been conducted in the matter of candy cups, for instance. Some of these experiments have been quite successful so far as classification and identification of the candies is concerned. Yet the function of the candy cup today is what it always has been—protection from damage of the pieces by sliding and knocking around in the container. The brown glassine cup will probably always remain the standard. Yet, where an assortment of chocolates is mixed with other types of candies in a single container, vari-colored cups serve nicely to give an appealing decorative effect upon the purchaser.

It is not likely that the coming years will see much change in the other types of "findings" such as embossed padding, wax paper protective sheets and liners, dividers of all kinds, lace flies, etc. These things are more than merely utilitarian, even though protection of the candy is their primary function. A good pack can be "made" or "un-made" by the findings that are used. The gift box must convey a certain "touch" and that certain touch has as its most important feature, next to the careful planning and quality of the pack itself, the choice of just the right kind of interior trimmings to set off the candy properly.

Bulk Candies Most Affected By Transparent Materials

Slack transparent materials (cellophane, pliofilm, etc.) have had their greatest packaging influence in the field of bulk candies. With the placing of much candy, hereto-

Use of light cups in a bright box makes this assortment attractive to the Summer or Fall customers. In the lower package, coated cellophane gives an opaque appearance, allowing transparency only where needed.

fore sold largely in bulk, in the packaged merchandise class, has come a tremendous upsurge in the sale of candy through outlets which formerly accounted for only a small portion of candy sold. This includes the grocery store field, the chain stores, the self-service stores, and all the other types of stores in this classification which have become very candy-conscious in recent years, and move a very substantial volume of transparent-wrapped candy annually. These transparent materials have also come in for considerable use by the package goods manufacturers, as over-wraps for boxes, as printed liners inside the box, and by the bar manufacturers, as inner liners and printed outside wraps. But it is in the bulk field where slack transparent materials have found their greatest utility, and that condition is likely to continue.

Rigid transparent materials are just beginning to make themselves felt in candy packaging, even though we have had certain types of rigid transparent materials on the market for years. The great interest in plastics over the past 10 years has spurred the efforts of a great many packaging supply firms to produce low-priced rigid transparent materials for lower-priced merchandise. The successful acomplishments of these pioneers are just now beginning to make a place for themselves in candy packaging. Yet, in my opinion, the use of this type of container for candy is limited, in that its very transparency will militate against its use for multi-layered assortments. In spite of this, however, the rigid transparent materials will exert a great influence on candy packaging in the next few years unless other unforeseen conditions exert a depressing influence.

Glassine, so largely used for bar wraps, and for a variety of other uses in the field of candy packaging, should gain ground in the next few years at the expense of foil. This will be especially true in the field of bar wraps, for in the past couple of years there has been a slow but steady trend back to foil wraps, following out of the development of a successful method for lithographing foil. Most foil used today is aluminum foil. The restrictions in the use of foil for domestic purposes in order to conserve aluminum for war use will perhaps dissipate the gains made by foil bar wraps in the past several years. However, foil will again be a lusty competitor in packaging when peaceful times return, for the remarkable records made in recent years by foil-wrapped bars, new bars and old reliables, will not soon be forgotten by the manufacturers who have used foil for their bar goods.

Glass once largely used for hard candies, is gradually giving way to other types of transparent packages. Yet it still has many friends among hard candy manufacturers.

Glass Being Replaced by Metal in Candy Packaging

Glass, once so largely used for hard candies, has practically disappeared from the candy packaging picture in the past 10 years. Its added weight and its susceptibility to breakage in transit ruled against its continued use for candy once the unbreakable, light transparent materials made their appearance. It has made a slight comeback for candy packaging in the past year or two, principally for novelty and re-use containers. Reference is made here only to jars, bottles, and that type of container, of course, and not to the fancy cedar boxes trimmed with mirrors, popular for so many years and likely to continue in their popularity for certain types of trade.

Metal containers have had a very definite place in candy packaging for quite a long time. The flat round tins have been very popular for ready-packed assortments put up by the manufacturer-retailers. Some wholesale manufacturers have also capitalized on them, to some extent. The one factor operating against a more universal use of this type container has been cost. The flat type tins, lithographed, are quite expensive by comparison with other types of packages, and unless a manufacturer can use enough of these to warrant specifying his own design, he must be content to choose from a somewhat limited line of stock designs. Thus, the retail-manufacturers have been the largest users of the flat one-pound, two-pound and three-pound lithographed tins.

The story does not read the same with reference to vacuum tins, however. In the past few years there has been an increase in the use of this type of container for certain kinds of confectionery, particularly salted nuts, certain kinds of brittles, pralines, some chocolates, and hard candies. As a general rule these vacuum tins have a printed or lithographed label of paper, but in some few cases the label is lithographed right to the metal.

Ribbons and ties have not changed a great deal in the past two decades. Nor has their use increased or diminished noticeably. There still seems to be a good deal of confusion over the functions of the ribbon on a box, and this leads ocasionally to improper use. Two primary functions of ribbons are to secure the lid to the box, and to add a decorative effect which the box design itself may lack. Most candy packages are on sure ground with reference to the first function, but fall down most often on the second function. As a result, we still see many boxes whose original good designs have been spoiled because someone insisted on putting a ribbon on the box—and in many cases this ribbon is secured only to the lid, therefore obviously not added with the intention of assisting in the security of the entire container. There is a very definite place for ribbons and ties on the candy box even today, but if ribbons and ties are used, the original box design should make proper allowance for their inclusion in the all-over effect of the box top when complete.

Sylvania Cellophane

SINCE 1929

"LOOK-SEE" means SALES

SYLVANIA cellophane has solved the most intricate packaging problems. It keeps packages of cough drops fresh and clean, retaining the original condition of the product. SYLVANIA cellophane has contributed *visual* appeal and protection to American merchandising, offering to all industries an opportunity to build sales.

Copr. 1941 Sylvania Ind. Corp.

SYLVANIA INDUSTRIAL CORPORATION

Executive and Sales Offices 122 E. 42nd Street, New York — Works: Fredericksburg, Va.

Branches or Representatives:

ATLANTA, GA. . . . . 78 Marietta Street
BOSTON, MASS., 201 Devonshire St.
CHICAGO, ILL., 427 W. Randolph St.
DALLAS, TEX. 812 Santa Fe Building
PHILA., PA. . . . 260 South Broad Street

Pacific Coast:
Blake, Moffitt & Towne
Offices & Warehouses in Principal Cities

Canada:
Victoria Paper & Twine Co., Ltd.
Toronto, Montreal, Halifax

SYLVANIA IS A REGISTERED TRADE MARK FOR CELLULOSE PRODUCTS MANUFACTURED BY SYLVANIA INDUSTRIAL CORPORATION

ALWAYS DEPENDABLE

IDEAL

WRAPPING MACHINES

The satisfaction of KNOWING that their wrapping machines will give EFFICIENT, UNINTERRUPTED SERVICE AT ALL TIMES is just one reason why candy manufacturers the world over prefer IDEAL Equipment. These machines, suitable for both large and small manufacturers, are fast, always dependable and economical. The SENIOR MODEL wraps 160 pieces per minute; new HIGH SPEED SPECIAL MODEL wraps 325 to 425 pieces per minute.

Both machines are built for the most exacting requirements and carry our unqualified guarantee.

Write For Complete Specifications and Prices

IDEAL WRAPPING MACHINE CO.

EST. 1906

MIDDLETOWN, N. Y. - - - U. S. A.

"Candy Packaging"

Appears Four Times a Year

(February, May, August, November)

as a

Reprinted Supplement

Write for Your Copies

THE MANUFACTURING CONFECTIONER

400 W. Madison St. Chicago, Illinois

Packaging has had considerable effect on the candy plant. In some plants where packaged candy is the only thing produced, it has been necessary to re-arrange the entire production layout. The introduction of machinery for various packaging operations has in frequent cases required a complete revision of the production procedure and re-planning of schedules. In other plants where a full line of bulk and packaged goods is produced, the changes in layout, scheduling, planning, etc. may not appear obvious. It can be said almost without qualification that hardly a plant in the country has not had to make adjusments in production in order to incorporate hand-packaging and, later, machine packaging. It is not the purpose of this article to go into detail with reference to the various packaging machines that have come into the candy plant in the past 20 years, but some reference can be made hurriedly to just a few of the machines as, for instance, kiss wrappers, caramel wrappers, machines for over-wrapping boxes with cellophane, bar wrapping machines, bag making and filling machines, tying machines, carton set-up and closing machines, and the host of others now being used for direct packaging jobs and some auxiliary packaging operations.

Warehousing and Labor Little Affected

Where candy producing plants are located away from sources of supply of packaging materials, considerable warehouse space has had to be set aside to house these things. Perhaps in some cases, even additional warehouse space added. In other cases, where storage space was adequate to handle these extra supplies, considerable re-arrangement of stores has been necessary so that bottle necks would not develop as a result of the additional supplies now stored.

Little direct effect on labor has been noted as a result of the development of packaging in the candy plant. When packaging was still largely hand-work, training of workers for certain packaging jobs was required. With the general mechanization of the various packaging operations, some portion of this labor has been trained to operate the machines, some has been absorbed in other production work, and a very small portion has been displaced. The most notable mechanization of all packaging jobs has taken place in the bar manufacturing plants. The least effected of all goods is fancy package goods. No one has yet developed a machine that will pack a box of candy. This will probably always remain a manual job because we do not like to have packaged assortments look too standardized or stereotyped. Even when chocolates have been machine-handled all the way through the production processes, they are made to look as nearly hand-made as possible. That is one of the paradoxes of the candy business. If a machine is ever developed for filling boxes with chocolates, its one requirement will probably be that every piece to be handled must stay within certain very clearly defined tolerances, as to size, weight, etc. The candy manufacturer will never stand for that, and neither will the public.

It has been impossible within the limitations of this article to cover every phase of candy packaging, or even to discuss exhaustively the few highlights touched upon. Ours has been an attempt to generalize upon the more obvious aspects of candy packaging and to attempt to foresee, also in a general way, what the future will bring. We have not, for instance, spent any time on candy advertising and merchandising as such, yet these two elements are so closely bound to the packaging aspect as to be part and parcel of the same general whole, inasmuch as all three have the same end in view—the movement of finished candy from plant to store, and from store to consumer.

Earlier in this article it was stated that candy manufacturers have become better merchandisers as a result of the new markets which have developed for candy that is packaged. That is still true, but it is also obvious that much more time must be spent by candy plant packaging, sales and merchandising executives of the future on 1), research, both of markets and products; 2), studies of store operation and merchandising trends; 3), on investigation of the proper place of all types of advertising in the candy sales picture; 4), on ways and means of obtaining three-way cooperation within a single organization between the packaging, merchandising and sales organizations to give every packaged candy item the very best opportunity of reaching an eventual sale. When that goal has been reached, Packaging will have reached its majority in the Confectionery Industry.

BEAUTIFUL BUT DUMB!

Occasionally you will find a package that is "beautiful but dumb" — so attractive to the eye that it aids impulse sales, but so inefficient in protective value that many repeat sales are lost. Although outer appearance is important, it is the buyers' opinion of what they find inside the package that really counts in the long run. That's why Riegel makes over 230 special papers for leaders in almost every field — papers that eliminate rancidity; prevent breakage, leakage or grease penetration; that preserve either crispness or moisture — papers that successfully cope with an almost endless variety of conditions that might retard sales if not properly met. These Riegel Packaging Papers combine their protective qualities with attractive appearance, economy and production efficiency. Write for our new sample book of Riegel Papers and investigate their ability to serve you.

RIEGEL PAPERS

RIEGEL PAPER CORP., 342 MADISON AVE., NEW YORK, N. Y.

Manufacturers are solving the weather problem on summer candies by turning to vacuum tins, as evidenced by this assortment viewed at the last Clinic session.

Candy Packaging Clinic - - -

CONDUCTED BY CANDY PACKAGING BOARD OF THE MANUFACTURING CONFECTIONER

Clinic Meetings of the Packaging Board are held Quarterly at M. C. Chicago Offices on 15th of the following months: January, April, July, October

Pecan Assortment

1 lb.—$1.00

CODE 5141 — Description: Vacuum tin, lithographed in two colors. On the bottom, affixed to the key-opener, a circular paper sheet on which is printed the story of the principal can top illustration. Mailing Carton.

Design: Tin top contains a picture of a scene in New Orleans' famous Old French Quarter. Side walls carry a pattern of iron-lace fence much used in the older sections of New Orleans, which is a good tie-up with the theme on the tin top. To carry the name of the manufacturer and other information required by the Food-Drug Law, a narrow band of blue paper with reverse white lettering secured with a printed gold seal has been attached to the upper portion of the side wall.

Appearance on Opening: Interior divided into four compartments by means of rough-cut cardboard dividers. Assortment contains four types of pecan candies: praline pieces, kisses, toffee and brittle, each type wrapped in its own individual wrapping material and each piece individually wrapped. Excellent eating candy, fresh and a good grade of nuts used.

Findings: Two groups of pieces are wrapped in transparent cellophane; one is wrapped in amber cellophane, and the fourth group is gold foiled. The compartments are made by rough-cut criss-cross dividers. Discs of wax paper above and below candy to separate it from metal.

Sales Appeal: Excellent, especially for the tourist trade in New Orleans It is especially interesting for this type of trade through the manufacturer's provision of a mailing carton. Use of the blue band gives a touch of color that adds to the attention-getting characteristics of this tin.

Display Value: Good. The introduction of the bright blue color band has added to the display possibilities of this tin. It is easy to visualize a store making up a complete window display featuring these tins during, say, Carnival Week in New Orleans. The original painting from which the tin top illustration is reproduced is very famous. Prints of this painting might well be used as background for the window display and perhaps costumed figures harking back to the old days.

Remarks: This package was viewed by the Clinic a little over a year ago. At that time the manufacturer was using a red imprint of his trade mark on the tin top. The Clinic felt this was ruining a good illustration and recommended that the trade mark be removed entirely, or at least, be worked into the tin top design more artistically. The manufacturer has chosen to remove it entirely and to bring the trade mark and other information down to the side wall of the box in the form of a paper band in blue with reverse white lettering. The result is a vast improvement over the original box, and the manufacturer is to be congratulated upon the excellent-looking container achieved. Provision of the mailing container is also an excellent idea. It will be interesting to learn how the sale of these candies have been affected by these changes. Also, what effect the mailing carton has had.

Mint Bubbles

7 oz.—35c

CODE 5241 — Description: Vacuum tin, lithographed in green, white and red. The strip of tin taken off by the key-opener comes completely off, leaving a narrow band which acts as hinge for the tin top.

Design: This tin has been re-designed since the Clinic last saw it. Formerly it had a paper label on which the design and other information was printed. At that time the Clinic suggested lithographing and also suggested certain changes in the bubble design which covered the entire label. The design change has been incorporated in the lithograph and a very light, airy and cool effect has been achieved, which is in keeping with the candy contained in this tin.

Appearance on Opening: Large balls or "bubbles" of light, white mint candy covered with thin red stripes, very much like sea foam except that it is crisp.

Findings: Circular discs of wax paper above and below the candy, and a wax liner completely around the interior to keep the candy away from the metal.

Sales Appeal: A very good summer candy on which this manufacturer is achieving wide distribution.

Display Value: Through a change in the label, this tin assortment has gained

"SPECIALISTS IN THE PACKAGING FIELD"

SWEETONE PAPER PRODUCTS

DECOPAD
(a Brand New Sweetone Product)

We maintain a complete department for cutting, dieing out and embossing our products to suit your specific requirements.

CHECK THESE

• PACKAGING SUPPLIES •

- CANDY MATS (Embossed and Plain)
- DIPPING PAPERS
- SHREDDED PAPERS
- GLOBULAR PARCHMENT
- GLASSINES
- WAX PAPERS
- EMBOSSED PAPERS
- CHOCOLATE DIVIDERS
- BOATS AND TRAYS (Plain and Printed)
- LAYER BOARDS
- DIE-CUT LINERS
- PARTITIONS
- PROTECTION PAPERS

•

(FLOSSINE)
The Candy Mat Supreme!

PADSIT DECOPAD

AND WRITE FOR SAMPLES & PRICES

GEORGE H. SWEETNAM, Inc.
282-286 PORTLAND STREET, CAMBRIDGE, MASS.

at least a 50% improvement in display value. The rich, but light green and the white-edged bubbles with the silver of the tin showing through, give a very light, summery appearance which is entirely in keeping with the contents of the tin box. This tin should lend itself to a variety of display.

Remarks: The entire decorative motif of this tin is in keeping with the goods which it contains. A great improvement over the label of the same tin viewed by the Clinic about a year ago. The candy is good eating and should move briskly in the summer market.

Pecan Pralines

1 lb.—59c

Code 5341 — Description: Vacuum tin with a printed paper label in three colors—red, green and yellow. The main panel (reproduced twice on the label) contains an oval sketch of a sugar plantation with a river boat and mill in the background. This oval is bordered at the sides with sugar cane stalks. Above it is the familiar trade mark of the manufacturer, and underneath, the name of the candy. The secondary panel is plain white, printed in blue. This panel contains copy only —a description of the history of this type of candy in the South. The paper label is perforated at top so that it will tear evenly when the tin is opened by means of the key.

Design: In the opinion of the Clinic, this is not a very good label design, inasmuch as it creates an old-fashioned impression without incorporating into the design anything to make it more attractive to the customer than other tins and other candy with which it must compete. The old-fashioned theme is fine, especially the tie-up between the "glamor and memories of old Creole days" and this candy, but this old-fashioned theme must be executed with a most modern touch if the candy is to sell well. A further criticism of this label is that it runs too high on the tin. Our re-design (shown in an accompanying illustration) does not attempt to carry out the first part of our recommendation, but does show how the present design could be executed so that nothing would be destroyed when the tin is opened.

Appearance on Opening: Five round bars of candy, each individually wrapped. The interior gave the appearance of being slack filled, although the candy achieved the net weight stated on the label. Perhaps breaking up of the five large bars into smaller units, each individually wrapped, would fill the tin better. Candy is excellent eating, nuts are crisp and fresh.

Findings: White corrugated liner around interior walls. White corrugated disc directly underneath cover and above candy and another underneath the candy in the bottom of the tin. Each praline piece was wrapped in cellophane, secured with an embossed seal.

Sales Appeal: The sales appeal of this package to customers in the South who know this type of candy is probably adequate with the present label. However, to others not familiar with the candy and its background, this label would have little in it to attract trade. A more modern execution of an old-time scene such as now used would tell the story and sell the candy to much better advantage.

Display Value: Limited, inasmuch as the label in its present execution does not permit of too much latitude in building suitable store window or counter backgrounds for this very excellent candy.

Remarks: When the present stock of paper labels runs out on this package, the manufacturer should give careful thought to lithographed tins. However, before going to the expense of lithographing, be sure that you have chosen a label design which will give a lot more "punch" to this package. The present illustration and design lack persuasiveness, they are not convincing enough to the customer. The design should compel attention, particularly on a tin of this type, since it must compete not only with other candy on display, but with every other item of merchandise similarly packed in a tin and offered on the store's counter or shelf.

Salted Pecans

8 oz.—69c

CODE 5441 — Description: Vacuum tin with paper printed label. Colors used are red, yellow and blue.

Design: The paper label has large areas printed in two-color ben-day. Slashing through this at a diagonal from upper left to lower right is a band about two inches wide showing illustrations of pecans. The manufacturer's trade mark is super-imposed over the nuts, in blue and underneath this, in outline block letters the words "Selected Large Louisiana." The bottom third of the label is solid yellowish red running completely around tin. The red area is broken upon by a small line of yellow marks, which is interrupted directly underneath the illustration of the nuts to allow space for the word "Pecans" in large reverse-white block letters. Reverse yellow lettering immediately above this in much smaller type further describes the nuts.

Criticism: The Clinic believes this label is adequate for this package. It would not be well to use a stark white label and merely imprint this in one or more colors and an illustration. On the other hand, it might be a good idea to allow the illustration of the nuts on this label to exert their own influence without interference from the "copy" which is super-imposed on the illustration, so that the nuts would show to better advantage on the illustration.

Contents: Large size, crisp salted pecans, which were very good eating. It is apparent that considerable care was used in the selection of the very best nut meats to be put up in this package.

Findings: Corrugated side-wall liner and discs of similar material above and below the contents.

Sales Appeal: This package is apparently designed largely for the market in the immediate vicinity of the manufacturer's home port. Vacuum packaging is the only way to assure freshness in a territory which abounds in warm humid weather. The assurance of freshness in the nuts should make this an attractive package for the Southern trade and for summer trade in the North.

Display Value: Not unusual.

Remarks: Again, the paper label is badly torn when this tin is opened.

Two Suggested Redesigns on Packages Viewed by The Clinic. Reasons for redesign are given in the Text.

This may be the answer to your foil problem

- If we may judge from the number of inquiries we have been receiving lately, a considerable number of confectioners are concerned about their foil needs, and are casting about for an adequate substitute.

- We do not make foil, but we do make what we consider to be a very worthy pair of substitutes: Silver Metalglass and Gold Lustron. Both are basically glassine paper, and therefore ideal for food packaging. Both are, compared to foil, and in fact, compared with most foil substitutes, quite inexpensive.

- We would like to make it quite clear that Gold Lustron and Silver Metalglass won't take the place of foil in every instance, because we know from experience they won't. But for many uses they are ideal and we suggest they are certainly worth-while investigating.

- Since foil became difficult to obtain a great many "substitutes" have been offered. The brief period of time which has elapsed since the onset of the emergency which brought these "substitutes" into being has been too short to prove whether or not they are proper for food packaging. Silver Metalglass and Gold Lustron, on the other hand, have been on the market for several years and have proved their usefulness. Both of these materials are not only in use in this country today, but, during the past few years have been successfully introduced to markets in South America, Africa, Australia, England and other countries overseas.

  Once again we suggest they are worth-while investigating.

●

HARTFORD CITY PAPER CO.

HARTFORD CITY, INDIANA

15 Park Row
New York, N. Y.

First National Bank Bldg.
Chicago, Ill.

Three Packages and Counter Merchandiser Viewed by the Clinic. The Pack of the Box at lower right was note-worthy as was the execution of the Counter Set-Up Carton.

Gives a very ragged effect and ruins the display panel on the label. This may not be serious in a package whose contents can be completely consumed within a very short time by the purchaser alone or by two or more people. In a package which would stand around for several days before the contents were consumed, the torn label would have a much greater chance of making the contents appear shoddy. The label is not outstanding, but is also not so bad that redesign would be immediately imperative.

Coffee Candy

4 oz.—35c

CODE 5541 — Description: Vacuum tin with lithographed paper label in three colors, red, blue and yellow.

Design: The label consists of a solid red background with two main panels opposite each other on the tin. The features of these panels are a scroll design beginning white at the top and shading off to green at the bottom. The manufacturer's trade mark is at the top of this scroll and underneath this the description of the candy. This scroll is hooked through the handle of a drip coffee can standing next to it. (Don't ask us how it was possible to put the handle through the paper without tearing the paper or taking the handles off the pot. But there it is!) The coffee can illustration also contains lettering in blue. Between the two main panels consisting of these described elements is a circular spot in yellow outlined in white containing the name and address of the manufacturer. The ingredients listing is in blue lettering outside and to the lower left of the scroll design.

Appearance on Opening: Brown candies in small pieces shaped like oversize coffee beans. The coffee flavor is so strong as to be almost bitter—most members of the Clinic Board decided the flavor was too strong. Yet, after eating more than one piece, the strength of the flavor does not appear so dominant.

Findings: Corrugated liner for inner side wall. Discs of same material above and below the contents. Pieces are individually wrapped in silver foil.

Sales Appeal: Not unusual. Coloring of the label is dull and the illustration not sales-compelling in any way. A modification of the coffee flavor is required if any amount of repeat sales is going to be realized on this package.

Display Value: Mediocre. With a brighter label, executed a bit more modernly, this package could be given greater display value at little cost, utilizing the same type of label; that is, a lithographed paper label.

Remarks: Labels for vacuum tins which open by means of a key should be executed in such a way that they tear evenly and so that the design is not destroyed. This label is lifeless and dull because of a poor choice of colors and mediocre designing of the principal panel.

Land and Sea Chocolates

1 lb.—$1.00

CODE 5641 — Description: Vacuum tin lithographed in yellow, pink blue, brown and black. Paper sticker in gold printed in black, containing list of ingredients, is secured to tin by means of cellulose tape.

Design: The all-over pattern on the side walls is an illustration of the New York City sky-line at sunrise. Name of the manufacturer and of the assortment are on a narrow blue panel in the center of the illustration. Two larger blue panels at the points where the two ends of the lithographed illustrations meet, contain description of the candies in the assortment and a statement relative to the method of pack used in this tin. The sky-line illustration with the smaller blue panel containing the manufacturer's name and name of the assortment is also lithographed on the tin top.

Criticism: The illustration used for this tin is good, in the opinion of the Clinic but the choice of colors leaves much to be desired. Granted that a sun-burst effect was desired, the use of pinks, purples and pale blue on a box of chocolates is not very appetizing.

Appearance on Opening: Very disappointing. The chocolate had bloomed, and the entire pack seemed to have sunk, so that the package gave the appearance of having been slack-filled. At first it was thought that some of the pieces in the bottom layers had perhaps been crushed by the weight of the upper layers. But investigation showed that it was the corrugated discs between the layers which could not carry the weight of the candy, and collapsed. A stronger layerboard is indicated.

Findings: Brown glassine cups. Inner-wall liner of brown corrugated glassine. Discs of same corrugated glassine between each layers and above and below upper and lower layers. Several pieces, one in each layer, were gold-foiled.

Sales Appeal: From the name of this assortment, it would appear that this box is designed to be purchased by the "folks back home" and shipped to brother, father or boy friend "in the service." The idea is excellent, but in the Clinic's opinion, this particular tin does not fill the bill, especially the execution of the color scheme. It was the opinion of the Clinic that the colors on this particular tin were depressing, and as such, the box would be a poor gift for the soldier in camp, or the sailor at sea, for all of its picturing of "little ol' New York." Properly displayed, it will probably attain a good volume in metropolitan centers.

Display Value: Good. The theme of "Land, Sea and Air" and the apparent market for which the tin is de-

Sparkling display talks up extra sales

"'CELLOPHANE' cellulose film gives self-selling power to our 10¢ package of wafers," say Rockwood & Company, Brooklyn, N. Y. "These transparent units placed on the retail counter in their handy display containers are an invitation to every shopper's appetite —a real appeal that brings pick-up sales.

"Another decided advantage is the way 'CELLOPHANE' helps retain the delicate flavors and odors of our chocolates. In our opinion, it's a natural for candy packages."

ACCORDING TO A RECENT SURVEY, 85% of American housewives say, "We prefer candy protected by "CELLOPHANE.'" We will be glad to help you design a package that will help your product cash in on this preference. No obligation: Just write: "Cellophane" Division, E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware.

DU PONT
REG. U. S. PAT. OFF.

"Cellophane is a trademark of E. I. du Pont de Nemours & Co. (Inc.)

signed should call up a variety of display ideas in the mind of the alert merchandiser. Nevertheless, the colors used on the tin limit the variety of display to some extent.

Remarks: From the description of the manner in which these chocolates have been packed, the customer would be led to believe that he was going to get something really unusual in this vacuum tin. What a disappointment to that buildup this particular box proved to be! The grayness of the candy, the sunken-in look of the pack, and careless appearance of the crushed corrugated layer boards, all combined to indicate that the manufacturer still has a long way to go to place this particular box within the quality range of that achieved for this manufacturer's other nationally-advertised candy. This particular tin would have been no treat to the boy in the service unfortunate enough to receive it from the folks back home. But the idea has excellent possibilities, and the Clinic hopes the manufacturer will spare no effort to put into this assortment all the manufacturing and packaging skill at his command.

Assorted Chocolates

1 lb.—29c

CODE 5741 — Description: Low-priced full telescope strawboard box covered with a dark buff colored embossed paper. The box top is edged in reddish brown and this color is also used for the printing on the box top and sides. Red is introduced in just a spot here and there in the illustration. Box is cellophane-wrapped, heat-sealed.

Design: The principal illustration at the left of the main panel shows a scene of an old homestead with a stone hedge in the front and in the middle distance at the left, a bucket-type well. At the right, in print, is the list of the various types of chocolates in the assortments. The end-walls carry a trade-mark design and the front side wall panel has a further description in the words "hand fashioned chocolates." This may be misleading, as the candy appears to be machine dipped and strung.

Criticism: This design seems to be quite adequate for the class of candy which this box contains. The introduction of the red in the printing adds to the cost without adding anything like "punch" to the design. It might be just as well to eliminate the red.

Appearance on Opening: A rather plain-looking assortment of various centers coated with medium dark chocolate, with a single milk-chocolate coated piece at the center. The stringing is not good; apparently the chocolate was too warm when strings were put on, for they have sunk back to almost a smooth surface. Size of the pieces is good. It might have helped the appearance of this pack to introduce one or two nut-cluster pieces. However, if a very plain appearance was desired, in keeping with the plain-ness of the "old homestead" theme, this effect was achieved. The pack looks almost austere.

Box Findings: Embossed padding above upper layer. It is glassine underlined. A unique feature was the small piece of glassine embossed in snow-flake designs, which contained the inspector's number (or perhaps the box number) in perforation. Brown glassine cups. Cardboard layerboard between upper and lower layer, and another glassine-underlined embossed pad above lower layer.

Sales Appeal: With the help of one of the leading shipping container manufacturers, this manufacturer has worked out a shipping container which holds a number of these 1 lb. boxes and can be used as a set-up display in the store. The box by itself would have little sales appeal, but in its shipping-display carton, it exerts considerable influence.

Display Value: By itself, mediocre. In its shipping-display carton, very good. The box is designed to be sold in food and grocery stores, and as such, it would not stand out enough if the box alone were forced to compete by itself. But in its display container, it can be put at vantage points in the retail outlet.

Remarks: This is a good buy for the money. The Clinic suggests however, that the manufacturer experiment a little with the top layer, with a view to making it a bit more interesting from an appearance standpoint.

Old Time Chocolates

1 lb.—45c

CODE 5941 — Description: Cellophane wrapped, heat-sealed, full telescope box covered with white litho paper. It is gold-edged and printed in dark blue. The bottom of the box indexes the types of pieces found in this assortment and carries out a smaller reproduction of the main panels design. This portion is printed in black.

Design: At the upper left is an old-fashioned signboard (broken board effect) with the words "hand-spun." In the center oval, an illustration of a colonial dame working at her spinning wheel. At the lower right, on a similar broken-board panel, the word "chocolates." In the upper right hand corner is a gold triangle in which the words "standard assortment" and a stock printer's ornament are printed in blue. Weight and name of manufacturer are carried in small type at the bottom, left and right. The side wall away from the logical front of the box is printed in old-English letters with the words "an olde New England favorite."

Criticism: It is apparent that the ideas of "old-fashioned" and "hand-spinning" are to be dominant in this design. Yet the present box top lacks unity of design and as a result, gives a scattered appearance. In an accompanying illustration is shown what could be done with this same design idea. The feature of the re-design is that it is compact, contains the same ideas desired in the original, and requires only a single color in producing on the box paper; thus, it is more appealing and can be produced at less cost.

Appearance on Opening: An interesting pack of light and dark coated centers of various types. The chocolate has excellent gloss and superior stringing. It is an appealing pack because of the use of light coated pieces to break up the monotony of color and because the stringing was done with obvious care. One cherry center piece had burst.

Box Findings: Embossed glassine-underlined pad above upper layer. Also, a small sheet of glassine embossed with snow-flake designs containing a perforated inspector's number (or package number). Brown layerboard between layers, and another embossed, glassine-underlined pad above lower layer. Brown cups used throughout. At this price, one or two foiled pieces could be used.

Sales Appeal: Should be good, especially on re-sale. The present box top design may militate against good initial volume on this assortment, but the candy is a good value at 45c. Incidentally, this is an odd price. Why?

Display Value: Only fair. The design is not sales-compelling. The suggested re-design would give much greater appeal to this good assortment.

Remarks: Why is it necessary to classify this as a "standard assortment?" This seems unnecessary as a feature prominently displayed on the main panel. If it is necessary for purposes of identification, it might be better incorporated on one of the side-walls. Indexing of the centers, on the bottom of the box, is a good idea, but if this is done, some explanation of how the customer may identify the various centers should also be included.

Chocolate Pellets

1¾ oz.—5c

CODE 5941 — Description: Knock-down counter merchandiser filled with 24 tubes. The counter merchandiser has a "flag" showing dramatized natural-color illustrations of the individual pieces to be found in the tube assortment. Each tube is in red with a lithographed color illustration of the pieces and the name of the piece in reverse white lower case letters.

Design: Design of both the merchandiser and the label of the tubes is excellent. Particularly effective in introducing this new confection is the broken-shell illustration on the flag, for it tells at a rapid glance what the candy is like. The lithographing on the tube gives a very idealized picture of the candy pieces, but this is acceptable.

Contents: Candies are small milk chocolate pellets covered with a thin, soft sugar coating in various flavors and colors. The appearance of this

S&S

TRANSWRAP

FORMS - FILLS - SEALS

60 or more per minute!

LOWER COST
BETTER PROTECTION
MORE ATTRACTIVE

Uses Cellophane, Pliofilm or other heat-sealing films from the roll . . . plain or printed. Makes a tight package, yet serrated or notched cut-off makes it very easy and quick to open. Package may be either the pillow type, or with gusset folds.

NEW FOLDER *fully illustrates TRANSWRAP possibilities; send for free copy!*

AS A LINER—you get the very tightest lined carton package with all the protection of the heat-sealed web.

FOR MAXIMUM DISPLAY VALUE—A better break at point-of-sale! Sparkling transparency; your product at its best in an attractive display carton.

STOKES & SMITH CO • DEPT. MC • FRANKFORD, PHILA., U. S. A.

candy still leaves much to be desired, especially after the beautiful build-up on the tube illustration. Nevertheless, the candy is excellent eating. It will be just a matter of time before the manufacturer finds the right method of panning, or the right combination of ingredients for the sugar coating, to produce a piece that is like, or at least very close, to the color and polish of the illustrated candies. However, it is most important that this problem be solved as soon as possible, else this very good candy may suffer in sales for lack of proper appearance.

Sales Appeal: This candy item is yet too new to warrant a definite statement about its sales appeal. The manufacturers have chosen an appealing package and an appealing merchandiser. The eating quality of the candy should produce re-sale volume. The crux of the matter, in the opinion of the Clinic, lies in the appearance of the candy pellets themselves.

Display Value: Excellent. We have already remarked on the fine idea of showing broken-shell illustrations of the pieces on the "flag." The particular counter-merchandiser sent to the Clinic had been damaged in transit, principally, we believe, because it builds up too high. Perhaps it might be a good idea to experiment with a broader, lower display-merchandiser, especially with a view to finding the shape and size which will combine the two virtues of coming through shipping in good shape and being a good merchandiser after reaching its destination.

Remarks: The Clinic predicts a good future for this candy, and it bases this prediction both upon the alertness of the management behind this new company and upon their acceptance of the Clinic's suggestions, in whole, or with modifications dictated by their own manufacturing and merchandising problems. Good attention-getting appeal has been built into the merchandiser and package and an improvement in the appearance of the pieces themselves will show very fair sales results.

CANDY TIED WITH RIBBONS — Means More Sales

We have largest stock in the Middle West

Satin—Messaline—Tinsel—French Chiffon—Novelty and Printed Ribbons—Rib-O-Nit—Ready-Made Bows and Rosettes.

Immediate delivery—High in quality—Low in price

R. C. TAFT CO.

429 W. RANDOLPH ST. CHICAGO

Dutch Candies

1 lb.—$1.00

CODE 51041 — Description: Ribbon-tied half-telescope package, covered with white litho paper. The ribbon used is blue, printed on one side with a silver checker design. Box top is padded, printed in blue, yellow, red and green. The edge over the lower portion which is covered by the telescoping of the box top, is gold edged.

Design: The four edges of the box top are solid blue outlined with a formal cartouche shape, the interior of which is white. This covers the entire main panel, leaving a large center area of white. The name of the assortment is in red lettering at the very center, in two lines; above and below this are small cuts of a Dutch boy (below) and girl (above). The remainder of this white area is filled with flowers (tulips, in green, yellow and red) very formally arranged and exactly placed.

Criticism: The ribbon on this box is superfluous from a design standpoint but must be used to secure the box top. A much simpler design for inside the outline shape would perhaps be a bit less confusing than the present design. The present design is "pretty," not necessarily sales-com-

pelling. The two figures of boy and girl should be brought together in some natural pose, such as, perhaps, placing tulips in the bowl, or some other natural activity which would bring both into equal prominence. Much fewer flowers should be used, and they, too, should be in natural positions.

Appearance on Opening: A very carefully packed two-layer assortment of chocolate-covered (dark) centers of various types. Gloss and stringing are excellent, and the chocolate used is of good quality. Two panned almonds in the center of the upper layer give a touch of color.

Box Findings: Glassine-underlined embossed padding above upper layer. The entire contents of the box is encircled with a glassine liner embossed with a rose design. Candies are in white glassine cups. The upper layer has a single row of chocolates all around acting as a border for the nine cupped pieces enclosed by a square, gold-edged divider. Brown layerboard between upper and lower layers.

Sales Appeal: This is a good, bright package which should have considerable appeal when properly displayed. While light pastel colors are used, they are not objectionable on this particular package. This assortment, both in its appearance and in its eating quality is well worth a dollar.

Display Value: Good. Both the box top and the top layer of this assortment can be used to advantage in inviting trade from the passersby.

Remarks: Granted that the present design used on this box top is not bad, it could be improved a great deal by simplification of the various elements now being used as illustrative material. A design should have compactness, should not give a loose or scattered feeling. In the hands of a skilled designer, the various elements of the present main panel design could be improved a great deal without much extra effort and definitely without in any way increasing the cost of producing the cover.

Retail Assortment

1 lb.—69c

CODE 51141 — Description: Half-telescope box covered, top and bottom, with a highly coated stock having an intricate embossed design. Printed in gold.

Design: No design, except the manufacturer's trade mark printed in gold at the exact center of the main panel. The nature of the box paper used makes it unnecessary for the manufacturer to use a design on this box.

Appearance on Opening: An interesting and very appetizing assortment of small chocolate covered centers (almost miniature size) with several panned pieces used for decorative purposes. Gloss and stringing of the chocolate is superior, as is the eating quality of the candy. The fruit centers especially gave the appearance and taste of expert handling in the manufacturing process. Candies are hand dipped and hand strung.

Box Findings: Glassine-underlined padding over top layer. Brown glassine cups. Brown layerboard between layers. Embossed lace flies attached to sides.

Sales Appeal: There is no definite sales problem involved in the moving of this candy off the store shelf, inasmuch as the company has attained a quality reputation in the area where it operates a number of its own outlets. This particular package is designed for mailing, and is therefore, packaged at the factory. The usual carry-out packages are packed in the stores where they are bought, and are therefore less elaborately packaged.

Display Value: Since there is no display problem involved in the sale of this candy, no features have been built into the box to give it special display value. Yet it is an excellent package by the very fact of its simplicity and the richness in appearance that it attains by the use of simple expedients, such as the rich-looking paper used to cover the box, and the gold-printed trade mark.

Remarks: After traveling almost a thousand miles by parcel post, this box was received in excellent condition by the Clinic. The candies stood their journey very well, and even the exterior of the box did not show evidence of having been shipped any great distance. This speaks well for the planning which has gone into the choosing of a box and an assortment designed for parcel post sales.

Fruits and Nuts

1 lb.—$1.00

CODE 51241 — Description: Cellophane-wrapped (seal-secured) extension-edge two layer box. The box top is covered with gold foil which has been partially over-printed in purple. The lower portion is covered with white litho paper. Embossed gold seal attached to cellophane wrapper gives price.

Design: The design of this box top is effected by the coating with purple. About two-thirds of the upper portion of the main panel is gold, with three narrow vertical bands coming down into this gold area at the left and right. The lower third is coated in purple. The words "fruits and nuts" are carried on a single line at the very top of the main panel, in purple letters outlined in black. In the exact center (still in the gold area) is an ornate oval figure in the center of which the name of the manufacturer is carried in hand-lettered modernistic script, (modified block) dark blue and outlined in the lighter purple. The words "assorted chocolates" are carried in a single line in the lower purple area, in gold letters outlined in black.

Criticism: The design gives this box a cheap look, and the whole execution of the main panel is weak. Starting with the oval at the center, it would be a lot better to carry out in it the same motive used on the gold seal with which the cellophane liner inside this box was secured. The Clinic as a whole agrees that purple is not a good color to use on a box of chocolates. The gold used with a good dark brown and having a good compact design idea simply executed, would give this package much more "punch" than it has in its present form.

Appearance on Opening: The upper layer contains seven compartments of chocolate covered (dark and milk coating) fruit and nut centers, with several panned almonds topped with chocolate thrown in to give color to the pack. Chocolates have good gloss and fair stringing. The arrangements of the light and dark coated pieces is good, as is the use of the three panned almonds. The good appearance of the upper layer follows through on the second layer.

Box Findings: Upper layer is in a tray covered with white litho paper. Brown glassine cups. Criss-cross divider edged with gold makes seven smaller compartments. Around this tray is a cellophane sheet secured with an embossed gold and black seal. A glassine-underlined embossed pad is above the candy. The lower layer is covered with the same kind of pad. It, too, is divided into seven smaller compartments, but the divider used for that purpose is plane brown.

Sales Appeal: There is not very much sales appeal in the box top of this package, because of the use of this lilac-purple for so much of the main panel area. However, the appearance of the pack is such as to exert very fair appeal, and the good quality of the goods is sufficient to assure very good repeat sales.

Display Value: Not good, but not bad, either. For all of its use of a color that is not very appealing for use with chocolate, the execution of the box indicates a certain deftness of handling that will give it, in some instances, very good display value. The upper layer of the box, displayed by itself will sell a lot more of this candy than will the box top in the Clinic's opinion.

Remarks: A good box of candy which merely needs a better box top to give it the sales volume it deserves. The present box top design and the colors used might put it in the "cheap" class for a good many customers. Yet, the candy is such a good value for a dollar that the manufacturers should give it a better box as soon as feasible.

THE MANUFACTURING CONFECTIONER'S CLEARING HOUSE

MACHINERY FOR SALE

FOR SALE: Candy machinery, enrober, starch buck, kettles, thermometers, change mixer, racks, trucks, scales, filling machines, day filter and mixer, 1 five-foot beater. Address E5411, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

FOR SALE: 1-5 ft. Dayton cream beater—direct drive with motor, in perfect condition with all new gears. Reasonable. Address E5413, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

FOR SALE: Package Machinery Co. FA-2 Wrapper. Purchased recently; in excellent condition. Address D4415, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

FOR SALE: Forgrove Model 22B Hard candy wrapper and two Package Machinery Model SK kiss wrappers. These machines are practically new and we will sell at exceptionally reasonable prices. Address D4416, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

FOR SALE: Hohberger continuous cooker, 1200 lb. cap. Hohberger seamless ball machine. Discontinuing this department and other miscellaneous machines. Must move immediately. Address D4417, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

FOR SALE: Two Iron Firemen Spreader type stokers. These stokers are in good condition and are a very economical and efficient piece of equipment. Address D4413, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

FRIGIDAIRE CANDY SHOW Cases, Candy Factory Chairs, Time Clock, Display Jars, Display Racks, etc. L. C. Blunt, 1647 Blake Street, Denver, Colorado.

MACHINERY FOR SALE

FOR SALE: Werner 100 lb. double action marshmallow beater, Savage Papoose marshmallow beater, 150-gal. single action gum kettle, 400 lb. Werner cream cooler, 24-inch enrober. Inquire Palmer Candy Company, Sioux City, Iowa.

MILLER HEAT-SEALING wrapping machine. Adjustable to various sizes up to 15 inch width. Without sheeter. $375. Must dispose of. Write for further details. Address C3413 c/o THE MANFACTURING CONFECTIONER, 400 West Madison St., Chicago, Ill.

FOR SALE: 1 High-Tone Glossing Machine for 24" enrober, in first-class condition and fitted with a 1/3 horse power 110 volt, 1750 RPM single phase AC motor. Machine practically new and priced right. Inquire Oswego Candy Works, Inc., Oswego, New York.

MACHINERY FOR SALE: Racine Hard Candy Cutter complete with Conveyer, etc. Brownie Chocolate Products, 201 Weston Rd., Toronto, Canada.

MACHINERY FOR SALE: Bainbridge Cut-Rool center maker, first class condition $350 cash, F.O.B. Totowa Candy Kitchen, 11 Church Street, Paterson, New Jersey.

MACHINERY WANTED

MACHINERY WANTED: Revolving pans standard with or without coils for grossing, finishing and polishing, sugar and chocolate pan work. State make of pan, size, ratio of gear reduction, size of pulleys, condition of pans and lowest cash price. Address D4412, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

WANTED: 32" enrober in good condition. Address B2413 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

MACHINERY WANTED

WANTED: Five foot Dayton Cream Beater. Advise condition and best price. Will pay cash. Address A1419 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

MACHINERY WANTED: Motor Driven fruit drop frame for No. 6 brass roller, conveyor, blower and shaker table. State whether with or without motor, length of conveyor and history and price of equipment. Address 194014 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago.

MACHINERY WANTED: Good condition used model S-1 Savage mixer and 4 foot F & B cream beater. Address I94016, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago.

WANTED: One Dreadnaught Friend hand roll machine. One late model 24-inch enrober, also automatic marker. Machines must be in A1 condition. Address Peacock Candy Co., 620 Second Ave., Des Moines, Iowa.

WANTED: Forgrove Foil Wrapper, State Condition, Location and Price. Address 194017 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago.

WANTED: Friend Model E or F Cream Center Machine, in good condition. Address 194010 c/o THE MANUFACTRRING CONFECTIONER, 400 W. Madison St., Chicago.

WANTED: 2—National Equipment 1000 lb. Chocolate Melters or 1—2000 lb. Chocolate Melter. Will pay cash. Address 19408 c/o THE MANUFACTURING CONFECTIONER, 400 Madison St., Chicago.

THE MANUFACTURING CONFECTIONER'S CLEARING HOUSE

MACHINERY WANTED

WANTED: Second-hand wood or steel Mogul, standard size. Must be A-1 condition. Address B2411 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

WANTED: Chocolate Melting Kettles 1000 to 2000 lb. cap., State Make, Type, and Price for Cash. Address E54014 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

WANTED: One Forgrove Automatic Foiling Machine, No. 26 with a universal disc. Pur-Arms Confectioners, Inc., 24 Downing Street, New York, N. Y.

HELP WANTED

EXPERIENCED ENROBER man wanted. One who can operate National Enrober with National chain decorator. Steady employment—good pay. Please give experience and reference in your first letter. Apply, Sierra Candy Co., Inc. 2201 Third St., San Francisco, Cal.

HELP WANTED: Cream Man. Handling hand rolls, creams and fondants, and working on Ball beaters. Thoroughly experienced. Address 194013 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago.

HELP WANTED — Enrober man. Experienced. For high class candy line. State age, reference and salary expected. Address L12401, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

PAN DEPARTMENT FOREMAN experienced particularly in jelly Easter eggs. Factory located in the East. Good experience and reference. Address A14110 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

HELP WANTED

THOROUGHLY EXPERIENCED and competent foreman for general packing department. Must have especially good background in marshmallow packaging. In application please give complete detailed information on education, business connections, salary expected, etc. Address C3411 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITIONS WANTED

SALES MANAGER now available. Good merchandiser of candy. Excellent personality, hard worker, capable. Can furnish satisfactory references. Will be glad to make appointment to confer with you at the NCA Convention or by mail. At present in Chicago. Address E5414, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

GRADUATE CHEMIST and technical candy man. Now employed by one of largest confectioners. Raw materials, product development, quality of production, vitamin and medicated goods. Position as chemist, assistant to president, or assistant superintendent. Address E5415, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

RESPONSIBLE POSITION desired by one whose managerial experience in both the manufacturing and marketing of candy and food products is complete and outstanding. His history and credentials reflect his ability to show results. He has demonstrated himself to be an executive in possession of mature judgment and a desirable personality. His educational background and accomplishments qualify him for consideration by leaders in the food industry. There are no weak spots in his character, habits, or reputation. Salary secondary to opportunity. If you are interested, and desire further details, or an interview, address E5416, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITIONS WANTED

FOOD CHEMIST. Now employed. After six years with large drug-chain wishes to make change. Thorough experience in manufacture of all soda-fountain supplies, candies, syrups, carbonated beverages and flavoring extracts. Wide experience with vitamins. Location immaterial. Address E5417, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

SITUATION WANTED: The new item man, the man you always need, ten years experience in managing and supervising chocolates, soft and hard candies, wafers. Outstanding ideas in candy construction and packaging. Own formulas. Economical production, experienced in installing new departments. College graduate. Will go anywhere. Address D44111, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITION WANTED: Superintendent, production engineer, practical candy man thoroughly experienced in all lines of high class package and chain store production. Efficient handling of equipment and personnel with production and cost control that will reduce costs. More than 20 years experience. Can create new items. Married. Address D4419, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITION WANTED — Pan foreman 26 years experience. Expert in chocolate pan work, steam and cold, finishing and polishing general line. Best of references. Address L12406, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Illinois.

POSITION WANTED: Practical candy man with wide acquaintance among the trade desires new connection for 1941. Consider either sales or technical work or will act as plant manager. High grade man with top references and proven ability. Address A1413 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

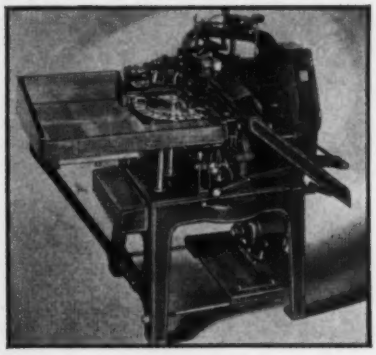
WORLD'S LARGEST STOCK OF MODERN REBUILT CONFECTIONERY AND CHOCOLATE MACHINERY

Available Immediately

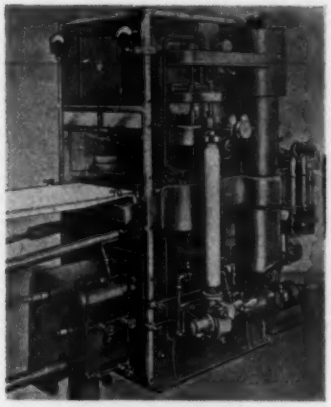
AT GREAT SAVINGS!

VISIT OUR BOOTH No. 49 AT THE N.C.A. EXPOSITION

JUST A FEW OF THE OUTSTANDING MACHINES IN OUR NEW YORK AND CHICAGO STOCK



For grove Model 22-B Hard Candy Wrapping Machine, for cellophane (practically new).



National Equipment 32" Enrober with automatic temperature control, and all attachments.

National Equipment 32" Enrober, equipped with Automatic Temperature control, Automatic Feeder, Bottomer, Detailer and 55 ft. Cooling Tunnel and Packing Table.

National Equipment Fully Automatic Wood Mogul, type AD.

Gaebel Continuous Automatic Plastic Hard Candy Outfit, with Automatic Batch Roller, Heated Sizer, Plastic Cutter and Cooling Conveyor with assortment of chains.

Huhn Double Unit Starch Dryer and Cooler.

Merrow Cut Roll Machine.

32" Greer Coater, directly motor driven, with Bottoming Attachment, Cooling Table, Cold Box and Packing Table.

National Equipment 24" Removable Tank Enrober, with attachments.

Racine Depositor with cooling tunnel and conveyor with metal belt.

Forgrove Hard Candy Wrapping Machine, model 22-B, for Cellophane. Late model, practically new.

Package Machinery Company, latest style, Type SK Cutting and Wrapping Machine.

Hansella Continuous Plastic Hard Candy Outfit, consisting of Hansella Continuous Plastic (filled goods) Machine, with five sets of dies, Hansella Automatic Batch Roller and Cooling Conveyor.

Wolfe Peanut 62" Coating Machine with Conveyor.

Racine 2000 lb. capacity Chocolate Melters.

National Equipment Chocolate Melters, 150, 300, 500, 1000 and 2000 lb. capacities, belt and motor driven.

Ideal Factory Model Caramel Cutting and Wrapping Machines, sizes ¾", ⅞", 1" and 1½" x ¾".

Nevers Double and Single Tier Cooling Slab Stackers, motor driven.

Simplex Steam and Gas Vacuum Cookers.

Hildreth Pulling Machines, form No. 3 and No. 6, motor driven.

Rose High Speed Toffee Cutting and Wrapping Machine, for cellophane with or without colored understrip.

Long Salt Water Taffy Wrapper Unit, consisting of Model KH Cutter and Wrapper, and Mills Batch Spinner.

Package Machinery model K Kiss Machines.

Package Machinery Sucker Wrapper.

Werner Fully Automatic Ball Machines, with 7 extra sets of rollers.

Racine Sucker Machines, with 30 ft. cooling conveyors, motor driven.

Racine Die Pop Machine, motor driven with 3 extra dies.

Hildreth Pulling Machines, form 5, motor driven.

Racine Cocoanut Slug Depositor, equipped with agitator.

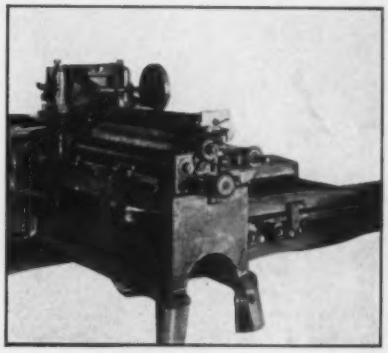
Dayton 5 ft. Cream Beater, motor driven.

Savage Marshmallow Beater, 80 gal. capacity, motor driven, with Texrope drive.

Still Set Up at the

PUTNAM FACTORY

36-44 Cherry St., S.W., Grand Rapids, Mich.



Hohberger fully automatic Ball Machine, with Sizer and 10 sets of rollers.

1—National Equipment Fully Automatic Steel Mogul.

1—Baker Perkins 32" Chocolate Coater with 85 ft. Economy Cooling Tunnel, and 15 ft. packing table, equipped with 32" Automatic Feeder, 32" Stringer and 32" National Equipment Decorator.

4—National Equipment 300 lb. chocolate melters.

1—Hohberger Continuous Automatic Cream Unit.

1—Crystal Cooker and Cooler, 24"x48"x36", equipped with coils.

1—Mills Reversible Sizer.

2—White 20" Caramel Cutters.

1—National Equipment Continuous Cooker, 600 lb. capacity with two 60 gallon pre-cooking Kettles.

1—Hohberger Fully Automatic Ball Machine with Sizer and 10 sets of rollers.

1—Hansella Automatic Batch Roller connected to Gaebel Heated Sizer, Hohberger Continuous Cutter and 3-way Cooling Conveyor.

4—York Batch Rollers, 6 ft., 7 ft., and 8 ft.

1—Waukesha Silver Comet Six Cylinder, 140 H.P. Diesel Engine connected with V-Belt Drive to, Allis Chalmers 240 volt generator.

17—Steam Jacketed Mixing and Cooking Kettles, Single or Double Action, Stationary and Tilting Type, sizes ranging from 15 gal. up to 150 gal.

INSPECTION INVITED

OUR REPRESENTATIVES ARE ON THE PREMISES DAILY.

WE INVITE YOUR INSPECTION OF OUR CHICAGO OFFICE

UNION STANDARD EQUIPMENT CO.

POSITIONS WANTED

POSITION WANTED: Pan Foreman; experienced in all types of panned items, including the chocolate pan line, quality and production, can create new numbers. Address D4411, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITION WANTED: Superintendent or Asst. Superintendent by positive all around candy maker and expert. Knows and runs almost every machine. Capable to create and standardize new items. Worked out a number of good sellers in bar and bulk line during four years of service with well known technical laboratory. No problem too hard to solve. Cost accounting, stock control, efficient with help. Studied chemistry and economics abroad. Highest references. Address 19404 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago.

POSITION WANTED: Graduate chemist and technical candy man. Thoroughly experienced in all aspects of manufacture and laboratory work. Product development, formula development and reconstruction, responsibility for quality of production. At present with one of country's largest manufacturers of all types of goods. Desire position with opportunity. Responsibility welcomed. Address K11403, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

SITUATION WANTED: Pan work Foreman. Can give best of references as to quality of product turned out, character, and handling of labor. Have been in employ of present company for over 30 years. Would like position in Central West. Address A1417 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITIONS WANTED

SITUATIONS WANTED: Hard Candy Foreman, 25 years experience in manufacture of high grade store trade. Have been in employ of my present company over 30 years. Can give good references as to character and workmanship. Desirous of position in Central West. Nationality—Swedish, age 50 years. Address A1415 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITION WANTED—First class all around candy maker capable as foreman or assistant superintendent. Thoroughly experienced minute knowledge of all methods and machines. Well versed in chain store quantity or high grade retail lines. American—40—of good habits. Good reference. Address L12402, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITION WANTED: Pan man with unlimited experience in all types of pan work. Qualified to take full charge of any size pan department. Creative, initiative, and the ability to demonstrate. Also ball and tablet coating. Eastern man on the coast nearly four years. Age 44, family man, over 25 years in pan line. References, will consider anywhere. A. K. Calbres, 1478 Masonic Ave., San Francisco, Cal.

POSITION WANTED: Chocolate man, many years experience in the chocolate industry from the bean up to the finished products. experiences in all branches of manufacturing, plain milk and summer coatings, machinery and hand dipping. Capable of handling help. A-1 references from some of the largest concerns in this country. Looking for a part time supervising position, preferably permanent in the above capacity. Available at once. Address B24110 %THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago.

POSITIONS WANTED

POSITION WANTED: A first class candy man. All lines up-to-date on production. Thoroughly familar on all machines. Have been superintendent of production for several years. Can produce a fine line of hand roll chocolate or packages. Have A1 references. Address G7403 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago.

CANDY BUYER AVAILABLE: Seventeen years experience in candy industry. Last eleven years buying for a national chain organization. Thoroughly familar with all types of candy and sources from coast to coast, also sales promotion. Address J104010 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison Street, Chicago.

SITUATION WANTED: Cream and Gum Foreman. With outstanding ability as to quality of product. Have been in employ of present company for over 30 years. Can give best references as to character and workmanship. Age 67 years—good health—nationality—Italian. Address A1416 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

SUPERINTENDENT OR ASSISTANT SUPERINTENDENT. Twenty-five years of experience including 15 years of supervision in general line of confections wholesale, retail and chain stores. Specialized in hand roll chocolate or packages, creams, nougats, marshmallows, soft cream goods, bars, jellies. Capable of producing quality and quantity at minimum cost. Efficient with personnel and can create new items. Have an extensive line of formulas and I am thoroughly familiar with all modern machinery and can place and set up same. Steady and industrious. Best of references, go anywhere. Position must be steady. Address K114013 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

POSITIONS WANTED

POSITION WANTED: Candy maker foreman now available. Twenty-five years retail and wholesale experience. Can produce quality merchandise. Address D4418, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

LINES WANTED

BULK LINES WANTED — Established broker, catering to bulk outlets, variety stores, chains, syndicates, etc. in Chicago territory, desires quality bulk lines. Can give your goods thorough distribution and proper representation through already-established buyer contacts. Now handling several bulk candy lines. Write: O. R. Torrison, 3219 Lawrence Ave., Chicago, Ill.

LINES WANTED for Illinois, Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska, Kansas and Missouri. Territory is covered every six weeks. Have two men beside myself and can use another reputable line for any part or all of this territory. Address John A. Murphy, Maryland Hotel, 900 Rush St., Chicago, Ill.

LINES WANTED—Energetic and arduous salesman, calling on candy jobbers, chain stores, supermarkets and exporters, is receptive for specialties or general line for complete or partial coverage of Metropolitan District of New York. What have you to offer? Address L12405, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

WANTED: Salesman calling on Retail Bakers, Confectioners, Dept. Stores, etc. in southern states, to represent as a side line manufacturer producing novelty line considered finest of its kind in the United States. Address A1411 c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

SALES REPRESENTATIVES

LARGE CANDY PLANT, completely equipped to make a general line of candy and a lot of profitable specialties for sale. Will consider financial interest, coming into the proposition with us, or sell as a going business. Ideally located for a large volume of business close to all the buying markets, and plenty of available labor. Address E5412, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

WANTED TO PURCHASE, rent or become active partner in middle sized, growing, well equipped factory, preferably on West Coast. Party interested is candy production expert. Write full details. Address D44110, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago,

RELIABLE CANDY BROKERS WANTED: Fast growing Pennsylvania manufacturer specializing in penny goods that sells has opening on January 1, 1941 for the following states; Ohio, West Virginia, Michigan, Illinois and New York. Address Brackenridge Nut and Candy Co., Braekenridge, Pa.

SALES REPRESENTATIVES: Profitable complete side line of ribbons. Every confectioner uses! Repeater! Good commission. Compact catalog. Address B2419, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

OPPORTUNITY! Wanted, party to purchase interest in old-established, nationally-known Chicago firm making high quality candies for the better trade, wholesale and retail, with national distribution. Party wanted should be able to give service in addition to his investment. Address K-114011, THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

WE BUY & SELL

ODD LOTS • OVER RUNS • SURPLUS

"Cellophane" BAGS

SHEETS • ROLLS • SHREDDINGS

Cellophane rolls in cutter boxes 100 ft. or more

ALSO MADE OF OTHER CELLULOSE FILM

Wax - Glassine Bags, Sheets & Rolls

Tying Ribbons-All Colors & Widths

Scotch Tape Clear & Colors

Diamond "Cellulose" Products

Harry L. Diamond
Sales Representative
1409 So. Michigan Ave. Chicago, Ill.

RELIABLE CANDY BROKERS WANTED: Outstanding Chicago manufacturer, specializing in hard and filled candies, fast selling pop line, and other hard candy specialties, will have territories available for January, 1941. Excellent opportunity for live brokers handling non-conflicting lines. Address K11406, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

LINES WANTED—Salesmen covering state of Pennsylvania excluding the city of Philadelphia is in position to take on a representation short line or several outstanding specialties on straight commission basis. Sixteen years experience contacting jobbers, syndicates, department stores and super markets. Territory covered closely and regularly by automobile. Very large personal following with the trade. Can give merchandise of merit through distribution. Address L12403, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

OPPORTUNITY: Wanted party to purchase interest in old-established, nationally known Iowa firm making high grade candies, for the better trade, wholesale and retail national distribution. Person wanted should be able to give service in addition to his investment. Address C3414, c/o THE MANUFACTURING CONFECTIONER, 400 W. Madison St., Chicago, Ill.

OFFICE OF THE PRESIDENT
A CANDY MANUFACTURER, INC.

Dear Joe:
1941 is our BIG chance to SELL MORE candy.
But not enough of the volume buyers are being covered by our salesmen.
Covered: Volume Buyers will only buy what they know about!

OFFICE OF THE PRESIDENT
A CANDY MANUFACTURER, INC.

(2) Government statistics show that 86% of all candy is sold to wholesale and chain buyers. Now, Joe, we've got to find a way to hit this market Harder!

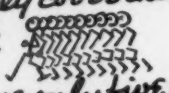
OFFICE OF THE PRESIDENT
A CANDY MANUFACTURER, INC.

(3) Trouble is – there are over 10,000 wholesale and BIG volume buyers!
10,000
They are not all candy wholesalers either, but include wholesale grocers, Tobacco jobbers, Wholesale Druggists, Department Store Buyers, many kinds of chain buyers. We don't reach them all.

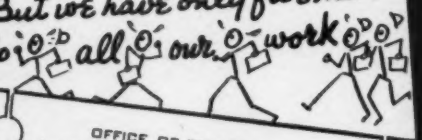
OFFICE OF THE PRESIDENT
A CANDY MANUFACTURER, INC.

(4) I figure it would take:
10 men making 12 calls a day to adequately cover this volume market.

10,000 × 3 calls = 30,000
250 working days
120 calls a day



But we have only five men to do all our work



A CANDY MANUFACTURER

(5) Now Joe – a lot of our old friends among buyers have changed jobs!
We've never in years needed to do so much "get-acquainted-with-our line-selling" or had as good prospects for new business as today!

OFFICE OF THE PRESIDENT
A CANDY MANUFACTURER, INC.

(6) As Sales Manager, what can you suggest to give complete market coverage of the volume candy buyers

?

SALES MANAGER'S OFFICE
A CANDY MANUFACTURER, INC.

Dear Chief:
Re: Volume Candy Buyers!
There are *some* selling jobs that can be done faster and more economically by advertising than by salesmen. Covering the volume Candy Buyers is one of those jobs.

2

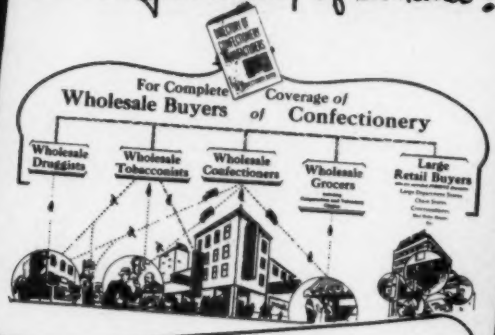
SALES MANAGER'S OFFICE
A CANDY MANUFACTURER, INC.

I've got here on my desk a "Candy Buyers Directory" which goes to just those **10,000** wholesale and chain buyers of candy you want covered!

3

SALES MANAGER'S OFFICE
A CANDY MANUFACTURER, INC.

It gives these "buyers" full information on just who makes candy – what kinds – where they are – the only directory of its kind!



4

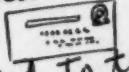
SALES MANAGER'S OFFICE
A CANDY MANUFACTURER, INC.

One single ad works all year -- reaches buyers every time they want to know where to buy.
When?
Right at the *time* they *want to buy*.
– Our ad, read at *that time*, would make sales

5

SALES MANAGER'S OFFICE
A CANDY MANUFACTURER, INC.

The best part of it is, that this complete and timely coverage will cost (for 1 page, or 4 quarter pages) less than sending



1¢ government card to these 10,000 buyers.
How is that for coverage?

Joe.

OFFICE OF THE PRESIDENT
A CANDY MANUFACTURER, INC.

O.K., Joe: Suggest you send "coupon" to the MANUFACTURING CONFECTIONER for rate card and details. This Directory looks good, let's get in it.

"Candy Buyer's Directory"
THE MANUFACTURING CONFECTIONER
400 W. MADISON STREET, CHICAGO, ILL.

Please send rate card and full details on Directory

Name
Firm
Address
Place

Index To Advertisers--

Acme Coppersmithing Co. 61
American Maize-Products Co. 63
Armour & Company..... 24

Walter Baker & Company, Inc...Third Cover
Baker Importing Co. 66
Basic Industries, Inc. 10
H. L. Blackwell Company..... 66
A. D. Bullerjahn & Company..... 69
Burrell Belting Company 53

California Fruit Growers Exchange.....
.....9, 45, 65
Fred S. Carver 12
Malcolm S. Clark Co..... 66
Clinton Company .....Fourth Cover
Confectionery Buyer 96, 97
Confectionery Industries Exposition..... 67
Corn Products Sales Co..... 71
Currie Manufacturing Co. 57

Harry L. Diamond 95
Dodge & Olcott Company..... 3
P. R. Dreyer, Inc..... 67
E. I. Du Pont de Nemours & Co. (Inc.)..... 87

Felton Chemical Company, Inc..... 7
Ferbo Co. 72
Florasynth Laboratories, Inc. 62
Fritzsche Brothers, Inc. 4
R. E. Funsten Co. 59

General Drug Company .....Second Cover
J. W. Greer Co..... 18

Handler and Merckens..... 58
Hartford City Paper Co..... 85
C. B. Henschel Mfg. Co...Candy Packaging
Hooton Chocolate Company 70

Ideal Wrapping Machine Co..... 80
Donald A. Ikeler..... 66

H. Kohnstamm & Co., Inc..... 64

J. M. Lehmann Company, Inc..... 68
James B. Long & Co., Inc..... 57
George Lueders & Company..... 56

Merck & Co., Inc.....22, 23
Merckens Chocolate Co., Inc..... 58
Modern Equipment Corporation 15
Monsanto Chemical Company 6

National Aniline & Chemical Co., Inc..... 66
National Equipment Company 11
National Starch Products, Inc..... 21

Oakite Products, Inc. 72

Package Machinery Company 74
Package Products Co.....Candy Packaging
Penick & Ford Ltd., Inc..... 19
Chas. Pfizer & Co., Inc..... 70

Riegel Paper Corp. 81
Ross & Rowe 20

Savage Bros. Co. 50, 51
Setter Brothers, Incorporated 61
Speas Mfg. Co. 72
A. E. Staley Mfg. Co..... 67
Standard Synthetics, Inc. 59
Stein Hall Mfg. Co..... 52
Stokes & Smith Co..... 89
George H. Sweetnam, Inc..... 83
Swift & Company 68
Sylvania Industrial Corporation 79

R. C. Taft Co..... 89

Union Standard Equipment Co..... 93
Union Starch & Refining Company..... 73
Vacuum Candy Machinery Co..... 49
Warfield Chocolate Division..... 62
White-Stokes Company, Inc. 13
Charles W. Williams Co.....
.....Candy Packaging